

1 IN THE UNITED STATES DISTRICT COURT

2 FOR THE EASTERN DISTRICT OF TEXAS

3 MARSHALL DIVISION

4 VOCALIFE LLC,) (

5 PLAINTIFF,) (CIVIL ACTION NO.

6) (2:19-CV-123-JRG

7 VS.) (MARSHALL, TEXAS

8) (

9 AMAZON.COM, INC. and) (

10 AMAZON.COM LLC,) (OCTOBER 1, 2020

11 DEFENDANTS.) (1:41 P.M.

12 TRANSCRIPT OF JURY TRIAL

13 AFTERNOON SESSION

14 BEFORE THE HONORABLE JUDGE RODNEY GILSTRAP

15 UNITED STATES CHIEF DISTRICT JUDGE

16
17 FOR THE PLAINTIFF:

18 MR. ALFRED R. FABRICANT
19 MR. PETER LAMBRIANAKOS
20 MR. VINCENT J. RUBINO, III
MS. AMY PARK
21 MR. ENRIQUE ITURRALDE
FABRICANT LLP
22 230 Park Avenue, 3rd Floor W.
New York, NY 10169

23 MR. SAMUEL F. BAXTER
24 MS. JENNIFER L. TRUELOVE
MCKOOL SMITH, P.C.
25 104 East Houston Street, Suite 300
Marshall, TX 75670

1 FOR THE DEFENDANTS:

2 MR. JOSEPH R. RE
ALAN G. LAQUER
3 KENDALL M. LOEBBAKA
JOSHUA J. STOWELL
4 KNOBBE, MARTENS, OLSON & BEAR, LLP
2040 Main Street, Fourteenth Floor
5 Irvine, CA 92614

6 MR. COLIN B. HEIDEMAN
KNOBBE, MARTENS, OLSON & BEAR, LLP
7 925 Fourth Avenue, Suite 2500
Seattle, WA 98104

8 MS. JENNIFER H. DOAN
9 MR. JOSHUA R. THANE
MR. KYLE R. AKIN
10 HALTOM & DOAN
6500 Summerhill Road, Suite 100
11 Texarkana, TX 75503

12 MR. J. DAVID HADDEN
MR. RAVI RANGANATH
13 MR. THOMAS JOHN FOX
FENWICK & WEST LLP
14 801 California Street
Mountain View, CA 94041

15 MR. DERON R. DACUS
16 THE DACUS FIRM, PC
821 ESE Loop 323, Suite 430
17 Tyler, TX 75701

18

19 COURT REPORTER: Shelly Holmes, CSR, TCRR
Official Reporter
20 United States District Court
Eastern District of Texas
21 Marshall Division
100 E. Houston Street
22 Marshall, Texas 75670
(903) 923-7464

23

24 (Proceedings recorded by mechanical stenography, transcript
produced on a CAT system.)

25

P R O C E E D I N G S

(Jury out.)

COURT SECURITY OFFICER: All rise.

THE COURT: Be seated, please.

All right. Counsel, are there questions from either Plaintiff or Defendant or anything that needs to be raised with the Court before I bring in the jury and begin with my preliminary instructions?

MS. TRUELOVE: Nothing from Plaintiff, Your Honor.

MR. DACUS: Nothing from Defendant, Your Honor.

THE COURT: All right. Then let's bring in the jury, please.

COURT SECURITY OFFICER: All rise.

(Jury in.)

THE COURT: Please be seated.

Welcome back from lunch, ladies and gentlemen.

I have some preliminary instructions that I need to give you at this time, and I'd like to give them to you on the record before we start with opening statements from the lawyers.

You've now been sworn as the jurors in this case. And as the jury, you are the sole judges of the facts. And as such, you will determine what all the facts are in this case.

As the Judge, I'll give you instructions on the

01:43:52 1 law. I will decide questions of law that arise during the
01:43:57 2 trial. I'll handle all matters related to evidence and
01:44:00 3 procedure. I'm responsible for overseeing the efficient
01:44:04 4 flow of the evidence in the trial and maintaining the
01:44:07 5 decorum of the courtroom.

01:44:08 6 At the end of the evidence, I'll give you detailed
01:44:14 7 instructions about the law to apply in deciding the case,
01:44:17 8 and I'll give you a list of questions that you are then to
01:44:20 9 answer. This list of questions, as I may have mentioned,
01:44:24 10 is called the verdict form.

01:44:26 11 Your answers to those questions will need to be
01:44:28 12 unanimous, and those answers to those questions will
01:44:33 13 constitute the jury's verdict in this case.

01:44:34 14 Now, I want to briefly tell you what the case is
01:44:38 15 about. As you know, this case involves a dispute regarding
01:44:42 16 one certain United States patent. I know that each of you
01:44:46 17 saw the patent video film produced by the Federal Judicial
01:44:50 18 Center, but I need to give you some instructions now and on
01:44:52 19 the record about a patent and how one is obtained.

01:44:56 20 Patents are granted or denied by the United States
01:44:59 21 Patent and Trademark Office, sometimes, for short, simply
01:45:03 22 called the PTO.

01:45:06 23 A valid United States patent gives the holder of
01:45:10 24 that patent the right for up to 20 years from the date the
01:45:13 25 patent application is filed, to prevent others from making,

01:45:18 1 using, offering to sell, or selling the patented invention
01:45:23 2 within the United States or from importing it into the
01:45:27 3 United States without the patentholder's permission.

01:45:31 4 A patent is a form of property called intellectual
01:45:36 5 property. And like other forms of property, a patent can
01:45:39 6 be bought or sold.

01:45:41 7 A violation of the patentholder's rights is called
01:45:46 8 infringement. A patentholder may try to enforce a patent
01:45:49 9 against persons it believes to be infringers by filing a
01:45:53 10 lawsuit in federal court. And that's what we have before
01:45:56 11 us in this case.

01:45:56 12 The process of obtaining a patent is called patent
01:46:01 13 prosecution. To obtain a patent, one must first file an
01:46:08 14 application with the PTO. The PTO, the United States
01:46:12 15 Patent and Trademark Office, is an agency of the United
01:46:16 16 States Government that employs trained examiners who review
01:46:20 17 applications for patents.

01:46:21 18 The application includes what is called a
01:46:26 19 specification. The specification contains a written
01:46:31 20 description of the claimed invention telling what it is,
01:46:34 21 how it works, how to make it, and how to use it. The
01:46:41 22 specification concludes, or ends, with one or more numbered
01:46:44 23 sentences. These numbered sentences are the patent claims.

01:46:50 24 When a patent is granted by the PTO, it is the
01:46:53 25 claims, ladies and gentlemen, that define the boundaries of

01:46:57 1 the patent's protection and give notice to the public of
01:47:00 2 those boundaries.

01:47:01 3 Patent claims may exist in two forms referred to
01:47:06 4 as independent claims and dependent claims.

01:47:09 5 An independent claim does not refer to any other
01:47:13 6 claim in the patent. It is independent. It's not
01:47:16 7 necessary to look at any other claim in the patent to
01:47:20 8 determine what an independent claim covers.

01:47:22 9 On the other hand, a dependent claim refers to at
01:47:28 10 least one other claim in the patent. A dependent claim
01:47:32 11 includes each limitation or element of that other claim or
01:47:38 12 claims from which it refers, or as we sometimes say, from
01:47:42 13 which it depends, as well as the additional elements or
01:47:46 14 limitations recited within the dependent claim itself.

01:47:49 15 Therefore, to determine what a dependent patent
01:47:54 16 claim covers, it's necessary to look at both the dependent
01:47:59 17 claim itself and the independent claim or claims from which
01:48:04 18 it refers, or as we say, from which it depends.

01:48:08 19 The claims of the patent-in-suit use the word
01:48:11 20 "comprising." Comprising means including or containing. A
01:48:16 21 claim that includes the word "comprising" is not limited to
01:48:19 22 the methods or devices having only the elements that are
01:48:24 23 recited in the claim but also includes methods or devices
01:48:28 24 that add additional elements.

01:48:30 25 Take, for example, a claim that covers a table.

01:48:36 1 If the claim recites a table comprising a tabletop, legs,
01:48:42 2 and glue, then the claim will cover any table that includes
01:48:46 3 these structures, even if it is a table that includes other
01:48:50 4 structures, such as a leaf to go in the top of the tabletop
01:48:54 5 or wheels to go on the bottom of the legs.

01:48:57 6 Now, that's a very simple example using the word
01:49:01 7 "comprising" and what it means. In other words, ladies and
01:49:06 8 gentlemen, it can have other features in addition to those
01:49:11 9 that are covered by the patent.

01:49:12 10 After the applicant files the application with the
01:49:27 11 PTO, an examiner reviews the application to determine
01:49:33 12 whether or not the claims are patentable, that is to say,
01:49:37 13 appropriate for patent protection, and whether or not the
01:49:40 14 specification adequately describes the invention that's
01:49:46 15 claimed.

01:49:48 16 In examining a patent application, the examiner
01:49:50 17 reviews certain information about the state of the
01:49:55 18 technology at the time the application is filed. The PTO
01:50:01 19 searches for and reviews this type of information that's
01:50:04 20 publicly available or that's submitted by the applicant.
01:50:08 21 This type of information is called prior art.

01:50:13 22 The examiner reviews this prior art to determine
01:50:15 23 whether or not the invention is truly an advance over the
01:50:19 24 state of the art at the time.

01:50:22 25 Prior art is defined by law, and I'll give you at

01:50:25 1 a later time specific instructions as to what constitutes
01:50:28 2 prior art. However, in general, prior art includes
01:50:33 3 information that demonstrates the state of the technology
01:50:37 4 that existed before the claimed invention was made or
01:50:41 5 before the application for the patent was filed.

01:50:43 6 A patent contains a list of certain prior art that
01:50:49 7 the examiner has considered. The items on this list are
01:50:53 8 called the cited references.

01:50:56 9 After the prior art search by the examiner and the
01:51:00 10 examination of the application, the examiner informs the
01:51:04 11 applicant in writing of what the examiner has found and
01:51:08 12 whether the examiner considers any claim to be patentable,
01:51:14 13 in which case it will be allowed. This writing from the
01:51:17 14 examiner is called an Office Action.

01:51:19 15 Now, if the examiner rejects the claims, the
01:51:23 16 applicant has the opportunity to respond to the examiner
01:51:27 17 and try to persuade the examiner to allow the claims. The
01:51:31 18 applicant also has the chance to change or amend the claims
01:51:35 19 or to submit new claims. And these papers generated in the
01:51:40 20 back-and-forth communications between the examiner and the
01:51:42 21 applicant are called the prosecution history.

01:51:47 22 And this process, this prosecution history
01:51:50 23 process, ladies and gentlemen, may go on back and forth
01:51:54 24 between the applicant -- applicant and the examiner for
01:51:56 25 some time until the examiner is ultimately satisfied that

01:52:02 1 the application meets the requirements for a patent.

01:52:06 2 And in that case, the application issues as a
01:52:08 3 United States patent. Or in the alternative, if the
01:52:13 4 examiner ultimately concludes that the application should
01:52:16 5 be rejected, then no patent is issued.

01:52:18 6 Sometimes patents are issued after appeals within
01:52:24 7 the PTO or to a court.

01:52:27 8 Now, the fact that the PTO grants a patent does
01:52:30 9 not necessarily mean that any invention claimed in the
01:52:33 10 patent, in fact, deserves the protection of a patent.

01:52:37 11 While an issued United States patent is presumed
01:52:40 12 to be valid under the law, a person accused of infringement
01:52:44 13 has the right to argue here in federal court that a claimed
01:52:48 14 invention in a patent is invalid.

01:52:52 15 Now, it's your job as the jury to consider the
01:52:54 16 evidence presented by the parties and determine
01:52:58 17 independently and for yourselves whether or not the
01:53:01 18 Defendants have proven that the -- that the patent-in-suit
01:53:05 19 is invalid.

01:53:06 20 Now, to help you follow the evidence, I'll give
01:53:11 21 you a brief summary of the positions of the two parties.

01:53:14 22 As you all know, the party that brings or
01:53:19 23 initiates a lawsuit is called the Plaintiff. The Plaintiff
01:53:22 24 in this case is Vocalife LLC, which you'll hear referred to
01:53:26 25 throughout the trial either simply as the Plaintiff or as

01:53:29 1 Vocalife.

01:53:30 2 And as you all know, the party against whom a
01:53:34 3 lawsuit is brought is called the Defendant. The Defendants
01:53:37 4 in this case are Amazon.com, Inc., and Amazon.com LLC,
01:53:43 5 which you will hear referred to throughout the trial either
01:53:45 6 as the Defendants or simply as Amazon, which collectively
01:53:51 7 will refer to both Defendants.

01:53:53 8 Now, as I told you during jury selection earlier
01:53:56 9 today, this is a case of alleged patent infringement. And
01:54:00 10 as I may have already mentioned, there is one United States
01:54:03 11 patent that's been asserted and is at issue in this case.

01:54:07 12 The asserted patent in this case is United States
01:54:11 13 Patent No. RE47,049. As you've been told, patents are
01:54:19 14 commonly referred to by their last three digits. So in
01:54:24 15 this case, the patent-in-suit, Patent No. RE47,049, will be
01:54:30 16 referred to almost every time as the '049 patent.

01:54:34 17 The asserted patent in this case is called a
01:54:38 18 reissue patent. A reissue patent is a patent that is based
01:54:42 19 on an original patent that, for one reason or another, has
01:54:47 20 been determined to have a mistake or a flaw that needs to
01:54:50 21 be corrected and replaced.

01:54:52 22 The reissue patent is a patent that corrects and
01:54:57 23 takes the place of the original patent, which is
01:55:00 24 sometimes -- which is surrendered as a part of the
01:55:04 25 reissuance process.

01:55:06 1 In this case, the original patent from which the
01:55:09 2 '049 patent reissued is United States Patent No. 8,861,756,
01:55:16 3 and you'll hear this patent referred to throughout the
01:55:19 4 trial as the '756 patent.

01:55:24 5 And as I have said, the '756 patent has been
01:55:29 6 surrendered at the time the '049 patent was reissued.

01:55:33 7 Now, the '049 patent, the patent-in-suit, will be
01:55:39 8 referred to throughout the trial at various times as either
01:55:42 9 the patent-in-suit, and it will sometimes be called the
01:55:47 10 asserted patent. Those references all mean the '049
01:55:54 11 patent. And this patent generally -- generally relates to
01:55:57 12 smart speaker systems.

01:55:59 13 Now, the Plaintiff, Vocalife, contends that the
01:56:01 14 Defendants, Amazon, are willfully infringing certain claims
01:56:05 15 of the patent-in-suit by importing, making, or selling
01:56:09 16 products that include their patented technology. Vocalife
01:56:14 17 also contends that Amazon has induced or contributed to and
01:56:18 18 continues to induce or contribute to infringement by
01:56:24 19 others. Vocalife also contends that it's entitled to money
01:56:28 20 damages as a result of that infringement.

01:56:30 21 On the other hand, the Defendants, Amazon, deny
01:56:34 22 that they are infringing the Plaintiff's patent-in-suit.
01:56:39 23 And they contend that the asserted claims of the
01:56:42 24 patent-in-suit are invalid as either being anticipated or
01:56:46 25 obvious in the light of prior art.

01:56:49 1 Amazon also contends that the asserted claims of
01:56:53 2 the patent-in-suit are invalid because the patent's
01:56:58 3 specifications do not contain a sufficient written
01:57:00 4 description of the invention and do not enable a person
01:57:05 5 skilled in the art to make and use the invention.

01:57:07 6 Finally, Amazon contends that the asserted claims
01:57:10 7 of the patent-in-suit is invalid because it is inoperative.

01:57:16 8 Now, ladies and gentlemen, I know that there are a
01:57:19 9 lot of new words and new concepts that have been thrown at
01:57:23 10 you since you arrived at the courthouse this morning. I'm
01:57:27 11 going to define a lot of those words and concepts for you
01:57:30 12 as we go through these instructions.

01:57:35 13 The attorneys in the case are going to discuss
01:57:37 14 them in their opening statements.

01:57:38 15 The witnesses that you hear during the course of
01:57:40 16 the trial are going to help you through their testimony to
01:57:42 17 understand those words and concepts.

01:57:47 18 So, please, do not feel overwhelmed at this early
01:57:51 19 stage. I promise you, it will all come together as we go
01:57:54 20 through the trial.

01:57:55 21 One of your jobs in this case, ladies and
01:57:58 22 gentlemen, is to decide whether or not the asserted claims
01:58:01 23 of the asserted patent have been infringed and whether they
01:58:08 24 are invalid.

01:58:09 25 If you decide that any claim of the patent-in-suit

01:58:12 1 has been infringed by the Defendants and is not invalid,
01:58:19 2 then you'll need to decide whether or not the Defendants'
01:58:23 3 infringement has been willful.

01:58:26 4 You'll also then need to decide what amount of
01:58:28 5 money damages should be awarded to the Plaintiff as
01:58:33 6 compensation for that infringement.

01:58:35 7 Now, my job in this case is to tell you what the
01:58:40 8 law is and to handle rulings on evidence and procedure and
01:58:43 9 to oversee the conduct of the trial.

01:58:46 10 In determining the law, it is specifically my job
01:58:48 11 to determine the meaning of any claim language from within
01:58:54 12 the asserted patent that needs interpretation. I have
01:58:58 13 already determined the meanings of some of the claim
01:59:01 14 language of the patent-in-suit. And you must accept those
01:59:06 15 meanings or constructions that I give you and use those
01:59:10 16 meanings when you decide whether any particular claim has
01:59:13 17 or has not been infringed and when you decide whether or
01:59:16 18 not any claim is invalid.

01:59:19 19 And you're going to be given a document in a few
01:59:24 20 minutes that reflect these meanings and interpretations
01:59:27 21 that I have already reached.

01:59:29 22 Now, for any claim language that I've not provided
01:59:32 23 you with a definition or a construction, you should apply
01:59:36 24 the plain and ordinary meaning of that claim language. If
01:59:40 25 I have provided you with a definition or a construction,

01:59:44 1 however, you must apply my definition to those terms and
01:59:49 2 that language throughout the case.

01:59:51 3 However, my interpretation of the language of the
01:59:55 4 claims should not be taken by you as an indication that I
01:59:59 5 have a personal opinion or any opinion at all regarding the
02:00:03 6 issues, such as infringement and invalidity. Those issues,
02:00:08 7 ladies and gentlemen, are yours alone to decide.

02:00:10 8 Now, I'll provide you with more detailed
02:00:14 9 instructions on the meaning of the claims before you retire
02:00:18 10 to deliberate and to reach your verdict.

02:00:20 11 In deciding the issues that are before you, you'll
02:00:23 12 be asked to consider specific legal rules. And I'll give
02:00:26 13 you an overview of those rules now. And then at the
02:00:29 14 conclusion of the case, I'll give you a much more detailed
02:00:32 15 instruction.

02:00:32 16 The first issue that you're asked to decide is
02:00:37 17 whether the Defendants, Amazon, have infringed any of the
02:00:41 18 asserted claims of the patent-in-suit.

02:00:44 19 Infringement, ladies and gentlemen, is assessed on
02:00:46 20 a claim-by-claim basis.

02:00:53 21 And Vocalife, the Plaintiff, must prove to you by
02:00:57 22 a preponderance of the evidence that a claim has been
02:01:02 23 infringed; therefore, there can be infringement as to one
02:01:04 24 claim but no infringement as to another claim.

02:01:09 25 There are also a few different ways that a patent

02:01:11 1 can be infringed. And I will explain the requirements for
02:01:15 2 each of these types of infringements to you in detail at
02:01:18 3 the conclusion of the case.

02:01:19 4 But, in general, a Defendant may infringe the
02:01:25 5 asserted patent by making, using, selling, or offering for
02:01:30 6 sale into the -- in the United States or importing into the
02:01:33 7 United States a product meeting all the requirements of a
02:01:37 8 claim of the asserted patent.

02:01:40 9 As I say, I'll give you more detailed instructions
02:01:43 10 on the requirements for infringement at the conclusion of
02:01:45 11 the case.

02:01:46 12 Now, the second issue that you'll be asked to
02:01:48 13 decide is whether the asserted patent is invalid.

02:01:52 14 Invalidity is a defense to infringement.
02:01:56 15 Therefore, even though the United States Patent and
02:02:00 16 Trademark Office has allowed the asserted claims and even
02:02:03 17 though an issued United States patent is presumed to be
02:02:07 18 valid, you, the jury, must decide whether those claims are
02:02:13 19 invalid after hearing all the evidence presented during the
02:02:16 20 course of the trial.

02:02:17 21 You may find that a claim is invalid for a number
02:02:21 22 of reasons, including because it claims subject matter that
02:02:25 23 is not new or because it is obvious.

02:02:29 24 For a -- for a patent claim to be invalid because
02:02:33 25 it is not new, the Defendant must show you by clear and

02:02:39 1 convincing evidence that all the elements or limitations of
02:02:43 2 a claim are sufficiently described in a single,
02:02:47 3 previously-printed publication or patent.

02:02:51 4 If a claim is not new, we say, ladies and
02:02:54 5 gentlemen, that it is anticipated.

02:02:57 6 Now, another way that a claim can be found to be
02:02:59 7 invalid is that it may have been obvious. Even though a
02:03:04 8 claim may not be anticipated because every element of the
02:03:09 9 claim is not shown or sufficiently described in a single
02:03:13 10 piece of prior art, the claim may still be invalid if it
02:03:17 11 would have been obvious to a person of ordinary skill in
02:03:21 12 the field of the technology of the patent at the relevant
02:03:25 13 time.

02:03:26 14 You'll need to consider a number of questions in
02:03:29 15 deciding whether the invention claimed in the asserted --
02:03:33 16 the asserted patent is obvious, and I'll provide you with
02:03:38 17 more detailed instructions on these issues at the
02:03:42 18 conclusion of the trial.

02:03:43 19 Another way that a claim can be found to be
02:03:45 20 invalid is that there may have been a lack of a written
02:03:49 21 description.

02:03:49 22 A patent may be invalid if it's specification does
02:03:54 23 not describe the claimed invention in sufficient detail so
02:03:59 24 that one skilled in the art can reasonably conclude that
02:04:03 25 the inventor actually had possession of the invention that

02:04:05 1 they're claiming.

02:04:08 2 A patent may also be invalid if the specification
02:04:12 3 does not adequately disclose to one skilled in the art how
02:04:16 4 to make or carry out the claimed invention without undue
02:04:21 5 experimentation.

02:04:25 6 A claim may also be found to be invalid if it is
02:04:29 7 inoperable. A claim is inoperative if it is not useful or
02:04:34 8 it does not work.

02:04:35 9 If you decide that any claim of the patents in --
02:04:38 10 of the patent-in-suit has been infringed and you also
02:04:42 11 decide that it is not invalid, then you'll need to decide
02:04:48 12 whether the Defendants' infringement has been willful.
02:04:54 13 You'll also need to decide at that time what amount of
02:04:56 14 money damages should be awarded to the Plaintiff to
02:04:58 15 compensate it for the infringement by the Defendant.

02:05:02 16 A damage award, ladies and gentlemen, must be
02:05:07 17 adequate to compensate the patentholder for the
02:05:11 18 infringement. And in no event may a damage award be less
02:05:16 19 than what the patentholder would have received if it had
02:05:21 20 been paid a reasonable royalty for the use of its patent.

02:05:24 21 However, the damages that you award, if any, are
02:05:27 22 meant to compensate the patentholder. And they are not
02:05:29 23 meant to punish the Defendant. And you may not include in
02:05:33 24 any damages that you might award an additional amount as a
02:05:38 25 fine or as a penalty or anything above what is necessary to

02:05:43 1 fully compensate the patentholder for the infringement.

02:05:47 2 Also, damages cannot be speculative, and the
02:05:53 3 Plaintiff, Vocalife, must prove the amount of its damages
02:05:56 4 for the alleged infringement by a preponderance of the
02:05:59 5 evidence.

02:06:03 6 I'll give you more detailed instructions on the
02:06:05 7 calculation of damages for the alleged infringement at the
02:06:10 8 conclusion of the trial, including giving you specific
02:06:12 9 instructions with regard to the calculation of a reasonable
02:06:17 10 royalty. However, the fact that I'm instructing you on
02:06:20 11 damages does not mean that Vocalife is or is not entitled
02:06:24 12 to recover damages.

02:06:26 13 Now, over the course of the trial, ladies and
02:06:29 14 gentlemen, you're going to be hearing from a number of
02:06:34 15 witnesses in this case. And I want you to keep an open
02:06:37 16 mind while you're listening to the evidence and not to
02:06:39 17 decide any of the facts until you have heard all the
02:06:44 18 evidence from all the witnesses.

02:06:49 19 This is important. While the witnesses are
02:06:51 20 testifying, remember that you will have to decide the
02:06:54 21 degree of credibility and believability to allocate to each
02:06:58 22 and every of the witnesses and the evidence that they
02:07:01 23 present.

02:07:05 24 So while the witnesses are testifying, you should
02:07:07 25 be asking yourselves things like this: Does the witness

02:07:10 1 impress you as being truthful? Does he or she have a
02:07:13 2 reason not to tell the truth? Does he or she have any
02:07:17 3 personal interest in the outcome of the case? Does the
02:07:21 4 witness seem to have a good memory? Did he or she have an
02:07:25 5 opportunity and ability to observe accurately the things
02:07:28 6 that they've testified about? Did the witness appear to
02:07:35 7 understand the questions clearly and answer them directly?
02:07:39 8 And, of course, does the witness's testimony differ from
02:07:41 9 the testimony of any other witness, and if it does, how
02:07:44 10 does it differ?

02:07:46 11 These are some of the kinds of things you should
02:07:51 12 be thinking about while you're listening to each of the
02:07:53 13 witnesses over the course of this trial.

02:07:55 14 Now, I also want to talk to you briefly about
02:07:58 15 expert witnesses. When knowledge of a technical subject
02:08:02 16 may be helpful to you, the jury, a person who has special
02:08:06 17 training and experience in that particular field -- we call
02:08:11 18 them an expert witness -- is permitted to testify to you
02:08:14 19 about his or her opinions on those technical matters.

02:08:20 20 However, you're not required to accept an expert's
02:08:23 21 opinion or any witness's opinion at all. It's up to you to
02:08:27 22 decide whether you believe any expert witness who testifies
02:08:31 23 in this case and whether you believe what they say is
02:08:35 24 correct or incorrect or whether or not you want to believe
02:08:38 25 it.

02:08:38 1 Now, I anticipate that there will be expert
02:08:41 2 witnesses testifying in support of both the Plaintiff and
02:08:45 3 the Defendant in this case. But when that happens, it will
02:08:49 4 be up to you to listen to their qualifications.

02:08:53 5 And when they give an opinion and explain the
02:08:55 6 basis for that opinion, you will have to evaluate what they
02:09:00 7 say, whether you believe it, and to what degree, if any,
02:09:03 8 that you want to give it weight in your considerations.

02:09:06 9 Remember, ladies and gentlemen, judging and
02:09:09 10 evaluating the credibility and believability of each and
02:09:13 11 every witness is an important part of your job as jurors.

02:09:18 12 Now, during the trial, it's possible that
02:09:22 13 testimony will be presented from one or more witnesses that
02:09:25 14 are going to be presented to you through what we call a
02:09:28 15 deposition.

02:09:28 16 In trials like this, it's difficult to get every
02:09:33 17 witness physically present in court at the same time. So
02:09:37 18 before the trial, lawyers for each side take the
02:09:40 19 depositions of the witnesses.

02:09:43 20 In a deposition, a court reporter is present, the
02:09:47 21 witness is there and is sworn and placed under oath.
02:09:50 22 Counsel for both sides are there. And then the lawyers ask
02:09:54 23 the witnesses questions, and the witnesses answer those
02:09:59 24 questions. And both the questions and the answers are
02:10:01 25 recorded and taken down. Often those questions and answers

02:10:06 1 are recorded not only in writing but by a video recording,
02:10:10 2 as well.

02:10:10 3 It's important to understand, ladies and
02:10:12 4 gentlemen, that these depositions often go on for multiple
02:10:16 5 hours at a time.

02:10:20 6 So with regard to witnesses who may be presented
02:10:22 7 to you in this trial by deposition, rather than have you
02:10:25 8 listen to the entirety of the deposition and the hours and
02:10:29 9 hours of it, the parties will select those portions they
02:10:33 10 think are important to present to you, and those deposition
02:10:37 11 designations and counter designations by the other party
02:10:40 12 will be put together and played to you as a single
02:10:43 13 presentation during the course of the trial.

02:10:46 14 That means during these witnesses who appear by
02:10:50 15 deposition, you may see or hear a different person begin to
02:10:55 16 ask questions and hear a different voice. Don't think that
02:10:58 17 you're missing something or something has been cut out.
02:11:02 18 That's simply the process of taking the Plaintiff's
02:11:06 19 designations and the Defendants' designations of that
02:11:08 20 single witness from the entirety of the deposition and
02:11:10 21 putting them together for a shortened, focused version to
02:11:14 22 present to you as that deposition witness's testimony
02:11:19 23 during the trial.

02:11:20 24 Now, the deposition testimony that may be
02:11:28 25 presented to you during the trial, I want you to

02:11:32 1 understand, that is entitled to the same consideration by
02:11:37 2 you as any other witness. And insofar as possible, it's to
02:11:41 3 be judged -- deposition testimony is to be judged, weighed
02:11:44 4 as to credibility, and otherwise considered by the jury in
02:11:47 5 the same way as if the witness had been present in person
02:11:51 6 and testified physically from the witness stand.

02:11:54 7 Now, during the course of the trial, it's possible
02:11:57 8 that lawyers will lodge certain objections. And I'll make
02:12:01 9 rulings on those objections if that happens.

02:12:04 10 It's the duty of an attorney for each side of the
02:12:07 11 case to object when the other side offers testimony or
02:12:11 12 other evidence that the attorney believes isn't proper
02:12:17 13 under the rules of the Court and the Rules of Evidence.

02:12:20 14 Now, upon allowing the testimony or other evidence
02:12:23 15 to be introduced over the objection of an attorney, the
02:12:26 16 Court does not, unless expressly stated, indicate any
02:12:30 17 opinion as to the weight or effect of such evidence.
02:12:34 18 Again, it is your job as the jury to weigh the credibility
02:12:37 19 and effect and believability of the witness -- of the
02:12:41 20 evidence, rather, from every witness.

02:12:43 21 Now, I want to compliment the parties in this case
02:12:47 22 because prior to today, they have worked with the Court
02:12:52 23 very diligently to go through all the exhibits that will be
02:12:57 24 shown to you during the course of the trial.

02:12:58 25 And in those efforts that took place during the

02:13:00 1 pre-trial hearings, that you were not required to be
02:13:03 2 present for, any exhibit that was challenged was taken up
02:13:09 3 by the Court, the Court considered its admissibility under
02:13:12 4 the Rules of Evidence, and ruled as to whether that exhibit
02:13:15 5 was proper or improper.

02:13:19 6 That means that all those arguments and all those
02:13:21 7 decisions have been already made, so you are not going to
02:13:25 8 have to sit through that part of the process during the
02:13:27 9 trial.

02:13:30 10 That means when an lawyer offers an exhibit and
02:13:33 11 publishes it and uses it before you, it's already been
02:13:36 12 found by the Court to be admissible. They do not have to
02:13:41 13 go through a formal presentation process, we do not have to
02:13:44 14 hear objections, and I do not have to enter rulings. All
02:13:47 15 of that has been already done.

02:13:48 16 So when an exhibit is presented during the trial,
02:13:52 17 you may consider it as proper. The lawyer will present it
02:13:55 18 with the witness, put it in the proper context, and you are
02:13:59 19 able to consider it without going through the additional
02:14:01 20 time necessary to make all those determinations.

02:14:04 21 You may not understand this, ladies and gentlemen,
02:14:06 22 but we have saved you hours and hours by going through that
02:14:09 23 before the trial started. And I want to compliment both
02:14:12 24 the Plaintiff and the Defendant and their counsel for
02:14:15 25 working with the Court to accomplish that.

02:14:17 1 However, it's still possible that over the course
02:14:26 2 of the trial objections may arise.

02:14:30 3 If I should sustain an objection to a question
02:14:33 4 addressed to a witness, then you must disregard that
02:14:36 5 question entirely, and you can draw -- should draw no
02:14:41 6 inference from its wordings, and you should not speculate
02:14:44 7 about what the witness would have said if I had permitted
02:14:47 8 them to answer the question.

02:14:48 9 On the other hand, if I overrule an objection,
02:14:56 10 then you should consider the question fully and the answer
02:14:58 11 fully as if no objection had ever been made.

02:15:01 12 Now, you should also understand, ladies and
02:15:03 13 gentlemen, that the law of the United States permits a
02:15:06 14 United States District Judge to comment to the jury
02:15:11 15 regarding the evidence, but such comments from the Judge on
02:15:15 16 the evidence are only an expression of the Judge's opinion,
02:15:18 17 and the jury may disregard those comments in their
02:15:21 18 entirety, because, as I've told you several times now, you,
02:15:26 19 the jury, are the sole judges of the facts. You are the
02:15:28 20 sole judges of the credibility and believability of the
02:15:32 21 witnesses and how much weight, if any, you want to give to
02:15:37 22 each and every part of the evidence that's presented over
02:15:39 23 the trial.

02:15:39 24 Now, even though the law may permit me to comment
02:15:43 25 on the evidence in this case, as I told you earlier, my

02:15:45 1 intention is to try very hard not to comment on any of the
02:15:49 2 evidence throughout the trial.

02:15:52 3 And you should not take any comments or
02:15:54 4 expressions or indications of any kind that you see from me
02:15:57 5 or you think you see from me as being a factor for your
02:16:01 6 consideration regarding the ultimate facts in this case.

02:16:09 7 Now, our court reporter in front of me,
02:16:12 8 Ms. Holmes, is taking down everything that is said in the
02:16:14 9 courtroom during the course of the trial, but the written
02:16:16 10 transcript of everything that's said in the courtroom is
02:16:19 11 not going to be available to you to consider during your
02:16:23 12 deliberations. That transcript is -- is prepared in case
02:16:30 13 there is an appeal of this Court's decision to a higher
02:16:32 14 Court.

02:16:32 15 So each of you, ladies and gentlemen, are going to
02:16:34 16 have to rely on your memories of the evidence during your
02:16:39 17 deliberations in this case.

02:16:40 18 Now, in a moment, each of you are going to be
02:16:43 19 given a juror notebook. In the back of that notebook
02:16:50 20 you're going to find a brand new legal pad that you can use
02:16:53 21 the blank pages of to take notes on over the course of the
02:16:56 22 trial, if you decide you want to take notes.

02:16:58 23 It's up to each of you to decide whether or not
02:17:00 24 you want to take notes, and if you do, how extensive you
02:17:03 25 want those notes to be.

02:17:05 1 But if you do, remember, those notes are for your
02:17:09 2 own personal notes only. You still have to rely on your
02:17:12 3 memory of the evidence, and that's why you should pay close
02:17:14 4 attention to the testimony of each and every witness.

02:17:16 5 You should not abandon your own recollection of
02:17:22 6 the evidence because some other juror's notes indicate
02:17:25 7 something differently. Notes are to refresh your
02:17:27 8 recollection -- your notes that you take are to refresh
02:17:32 9 your recollection of the evidence, and that's the only
02:17:34 10 reason you should be taking them.

02:17:36 11 Now, at this time, I'm going to ask Mr. Johnston,
02:17:39 12 our Court Security Officer, to pass out these juror
02:17:41 13 notebooks to each member of the jury.

02:18:28 14 Thank you, Mr. Johnston.

02:18:31 15 In these notebooks, ladies and gentlemen, you'll
02:18:33 16 see that you each have a copy of the asserted patent, the
02:18:40 17 '049 patent, that we've talked about.

02:18:42 18 You'll also find a section of tabbed pages for all
02:18:46 19 of the witnesses that we expect may testify over the course
02:18:49 20 of the trial. And behind those tabs, you'll find a page
02:18:53 21 for each witness with their head and shoulders photograph
02:18:56 22 superimposed at the top of the page.

02:18:58 23 The Court often finds that jurors benefit from
02:19:03 24 being able to see a picture of the person that testified
02:19:06 25 when they're trying to reconstruct and reconsider all the

02:19:10 1 evidence that's been given over the course of a trial.

02:19:12 2 Below the photograph of each witness, there are
02:19:17 3 lines that you can also use to take additional notes on, on
02:19:19 4 those pages if you choose to.

02:19:21 5 You'll also find in there a list of the claim
02:19:24 6 terms or language that the Court has already construed and
02:19:28 7 given you definitions or constructions for.

02:19:32 8 Again, those constructions, those definitions that
02:19:36 9 the Court has given you must be applied by you to the
02:19:39 10 language of the claims when you decide the issues of
02:19:42 11 infringement and invalidity.

02:19:43 12 Now, these notebooks, ladies and gentlemen, should
02:19:48 13 be in your possession at all times. They're not to be left
02:19:53 14 unattended to. They should either be with you in the jury
02:19:56 15 box where you have them now, or at the end of the day when
02:20:01 16 you leave, you should take them to the jury room and leave
02:20:04 17 them closed on the table in the jury room so that you can
02:20:07 18 pick them up the next morning.

02:20:08 19 Now, there may be times over the course of the
02:20:10 20 trial when we're going to take a brief recess and only be
02:20:14 21 out of the courtroom a matter of a few minutes. In that
02:20:17 22 case, I may very well say, ladies and gentlemen, you may
02:20:20 23 simply close and leave your notebooks in your chairs.

02:20:24 24 And, in that case, just leave them in your chairs,
02:20:26 25 recess to the jury room, and then when we're back in a

02:20:29 1 short period of time, they'll be there waiting for you.

02:20:32 2 But if we're going to be out of the courtroom for
02:20:36 3 any length of time, I'm going to ask you to take those
02:20:39 4 juror notebooks with you and keep them in your possession.

02:20:43 5 You'll also find, I think, in the front flap of
02:20:46 6 those notebooks a pen for note-taking in case you don't
02:20:51 7 already have one.

02:20:51 8 Now, in a moment, ladies and gentlemen, the
02:20:55 9 attorneys for the parties are going to present their
02:20:58 10 opening statements. Those opening statements are intended
02:21:01 11 to give you a roadmap of what each side expects to offer
02:21:05 12 through the evidence that they'll present.

02:21:08 13 And you should remember throughout this trial,
02:21:11 14 ladies and gentlemen, that what the lawyers tell you is not
02:21:13 15 evidence. Let me say that again. What the lawyers tell
02:21:18 16 you is not evidence.

02:21:22 17 The evidence in this case is the sworn testimony
02:21:24 18 of the witnesses presented under oath and subject to
02:21:27 19 cross-examination from the witness stand in open court or
02:21:32 20 from that sworn testimony presented to you by deposition
02:21:35 21 that I described earlier.

02:21:37 22 And it includes the exhibits which the Court has
02:21:40 23 determined to be properly admissible and which are shown to
02:21:43 24 you over the course of the trial. That is the evidence in
02:21:48 25 the case.

02:21:48 1 What the lawyers tell you is not evidence in the
02:21:53 2 case, but simply it's what their impression is of the
02:21:58 3 evidence, and they have a duty to point out to you what
02:22:01 4 they believe the evidence is. But, remember, what they're
02:22:03 5 telling you is not evidence.

02:22:04 6 Now, after the opening statements are given by
02:22:07 7 both Plaintiff and then Defendant, the Plaintiff will
02:22:10 8 present its witnesses and present its evidence in the case.
02:22:15 9 That's called the Plaintiff's case-in-chief.

02:22:18 10 And after the Defendants -- excuse me, after the
02:22:21 11 Plaintiffs have called their witnesses and presented their
02:22:24 12 evidence, they will rest their case-in-chief.

02:22:26 13 When the Plaintiffs rest their case-in-chief, then
02:22:34 14 the Defendants will present their evidence and call their
02:22:36 15 witnesses, and that will constitute the Defendants'
02:22:38 16 case-in-chief.

02:22:39 17 And when the Defendants have presented all their
02:22:41 18 witnesses and evidence, the Defendants will rest their
02:22:44 19 case-in-chief.

02:22:45 20 When the Defendants rest their case-in-chief, then
02:22:48 21 the Plaintiff has the opportunity to call rebuttal
02:22:52 22 witnesses to rebut what the Defendants have shown. And
02:22:57 23 that evidence, if the Plaintiffs choose to present it, is
02:23:00 24 called the Plaintiff's rebuttal case.

02:23:03 25 When the Plaintiff's rebuttal case, if there is

02:23:05 1 one, is concluded, then and at that point, you will have
02:23:09 2 heard all the evidence in this case.

02:23:14 3 And at that time, I will give you written
02:23:15 4 instructions about the law to apply, and you will have a
02:23:19 5 copy of my written instructions to take with you to the
02:23:22 6 jury room and to consider during your deliberations.

02:23:25 7 These final instructions that I will give you
02:23:30 8 after you've heard all the evidence are sometimes called
02:23:33 9 the Court's charge to the jury.

02:23:35 10 After I have given you my final instructions, or
02:23:39 11 as it's sometimes called the Court's charge to the jury,
02:23:42 12 then the parties will present their closing arguments. The
02:23:46 13 Plaintiff will present first, then the Defendant, then the
02:23:49 14 Plaintiff gets a final closing argument.

02:23:51 15 Those closing arguments will be presented to you,
02:23:55 16 and when you have heard the closing arguments of both
02:23:58 17 sides, then I will instruct you to retire to the jury room
02:24:03 18 and to consider and return a verdict in this case.

02:24:06 19 Let me -- let me repeat my earlier instruction to
02:24:12 20 you. You are not to discuss this case or communicate about
02:24:16 21 this case with anyone, including the eight members of the
02:24:22 22 jury, until such time as you have heard all the evidence, I
02:24:27 23 have given you my final instructions on the law, and
02:24:29 24 counsel for both sides have presented their closing
02:24:33 25 arguments.

02:24:33 1 At that point in time, when I direct you to retire
02:24:36 2 to the jury room and to deliberate on your verdict, then
02:24:40 3 everything changes.

02:24:41 4 And at that point, you go from not being able to
02:24:44 5 discuss the case among the eight of you to being required
02:24:47 6 to discuss the case among the eight of you. But at that
02:24:53 7 point, when you first discuss the case among yourselves,
02:24:56 8 you will have heard all the evidence.

02:24:58 9 That's why it's important that you not discuss the
02:25:00 10 case among yourselves until that time, before you've heard
02:25:04 11 all the evidence, before you've received my final
02:25:08 12 instructions, and before you've heard closing arguments of
02:25:10 13 counsel.

02:25:11 14 Let me also remind you again, as I did before
02:25:16 15 lunch, over the course of the next week or so while we try
02:25:19 16 this case, when you come in close contact with any of the
02:25:23 17 people associated with either Plaintiff or Defendant,
02:25:26 18 they're not going to speak, they're not going to be
02:25:30 19 engaging, they're not going to be friendly. That's what
02:25:33 20 I've required of them.

02:25:34 21 Don't hold that against them. Don't think they're
02:25:36 22 being rude or unfriendly. Remember, that's my requirement
02:25:39 23 to them, again, so that the only information you have is
02:25:44 24 what's presented to you over the course of the trial
02:25:46 25 through the sworn testimony of the witnesses and the

02:25:49 1 exhibits that are introduced and a part of the evidence in
02:25:52 2 the case.

02:25:52 3 All right. Ladies and gentlemen, those are my
02:25:56 4 preliminary instructions to you. And at this time, we're
02:25:59 5 going to proceed to hear opening statements from the
02:26:02 6 parties.

02:26:02 7 We'll proceed first with the Plaintiff. Plaintiff
02:26:05 8 may present its opening statement to the jury.

02:26:10 9 Would you like a warning on your time,
02:26:12 10 Mr. Fabricant?

02:26:12 11 MR. FABRICANT: Yes, Your Honor, if I could please
02:26:15 12 have five minutes and then two minutes.

02:26:16 13 THE COURT: Five minutes and two minutes. I will
02:26:19 14 do that.

02:26:19 15 MR. FABRICANT: Thank you.

02:26:19 16 THE COURT: You may proceed when you're ready.

02:26:20 17 MR. FABRICANT: Thank you, Your Honor. May it
02:26:23 18 please the Court.

02:26:23 19 Welcome to the members of the jury. As you heard
02:26:30 20 this morning from Mr. Dacus during jury selection, my name
02:26:34 21 is Fred Fabricant. I am not a Texan. I am from the great
02:26:40 22 state of New York.

02:26:42 23 But I do spend a lot of time in Texas and spend a
02:26:46 24 lot of time in Marshall, Texas, working with Sam Baxter and
02:26:50 25 Jennifer Truelove, and many other attorneys in this

02:26:52 1 district. And I've been coming here for nearly 20 years
02:26:56 2 working on patent cases in this Eastern District of Texas.

02:26:58 3 Just let me tell you a little bit about myself
02:27:00 4 because I didn't get to introduce myself.

02:27:03 5 I have been married happily for 47 years. I have
02:27:07 6 three grown adult daughters and I have three
02:27:12 7 granddaughters. And, finally we did get that little
02:27:14 8 grandson. So a little bit about myself.

02:27:16 9 At the table here, Plaintiff's table today with
02:27:19 10 me, is Dr. Li. Dr. Li is the owner of Vocalife. And he
02:27:22 11 will be our first witness today. So when we're done with
02:27:27 12 opening statements, Dr. Li will testify.

02:27:28 13 Also, at the table is Jennifer Truelove, who you
02:27:32 14 met this morning. And Peter Lambrianakos, my partner, and
02:27:36 15 my partner, Vincent Rubino, both of whom will be
02:27:38 16 participating throughout the next week.

02:27:40 17 So who is Vocalife? It's not a brand name that
02:27:51 18 one recognizes like Amazon, that's for sure. It is a small
02:27:55 19 company located in Plano, Texas, and it's a research and
02:28:00 20 development company. But it also is a company which makes
02:28:02 21 product. And Vocalife, as you've heard, is the owner of
02:28:05 22 the '049 patent, which is the patent in this lawsuit.

02:28:06 23 And Vocalife develops and sells microphone array
02:28:11 24 and speaker recognition and noise cancellation products.
02:28:15 25 And they sell those products to private companies and to

02:28:19 1 the U.S. Government even.

02:28:20 2 They sell presently their product to the Internal
02:28:23 3 Revenue Service. And that product is used by the Internal
02:28:27 4 Revenue Service in conference rooms where people have to
02:28:29 5 come in for interviews, for meetings with the IRS. They're
02:28:32 6 able to sit at a table with this product, and it's able to
02:28:35 7 detect people speaking from all over the room, because
02:28:39 8 that's what the invention of the '049 product is.

02:28:40 9 This is the embodiment in the Vocalife product of
02:28:47 10 the patent.

02:28:48 11 On the left is the CrispMic II microphone, and
02:28:52 12 that is a product which can detect speech from anywhere in
02:28:56 13 a room. It can determine the location of the speaker. It
02:29:01 14 can determine the direction of the speaker. It canceled --
02:29:05 15 cancels noise.

02:29:07 16 And this particular product is in a circular array
02:29:09 17 because that works very, very well in helping to detect
02:29:14 18 where a speaker is speaking from.

02:29:16 19 In order to control the type of things that we all
02:29:19 20 control today on the Internet, like using the Echo product,
02:29:24 21 that device has to be able to recognize the speech. Play
02:29:28 22 Billy Joel on Spotify in my kitchen. It has to be able to
02:29:32 23 understand that. And that's what this product does.

02:29:34 24 The pictures on the left are what the inside of
02:29:37 25 that device looks like, and those internal parts are also

02:29:41 1 sold separately, because some manufacturers want to use
02:29:44 2 their own device, but they'll buy the internal microphone
02:29:47 3 array to put into their own device, as Amazon could have
02:29:52 4 done to put into the Echo, had they respected the patent.

02:29:56 5 Mr. -- Dr. Li -- Dr. Li is a Ph.D. in electrical
02:30:01 6 engineering. He's the owner of Vocalife. He also has a
02:30:07 7 sister company called Li Technology -- Li Creative
02:30:10 8 Technologies. And he is the co-inventor of the '049
02:30:12 9 patent.

02:30:12 10 He was also a research scientist for years at the
02:30:16 11 Bell Laboratories in New Jersey, which is one of the most
02:30:19 12 famous research laboratories in the world. And I believe
02:30:22 13 the most Nobel laureates of any research laboratory.

02:30:28 14 Also, testifying this week will be the
02:30:31 15 co-inventor, Dr. Manli Zhu, Ph.D. from Ohio State
02:30:35 16 University. And she was the co-inventor of the '049. And
02:30:37 17 her specialty -- and this is really the genius of the
02:30:40 18 invention -- her specialty is in developing the software
02:30:43 19 and the algorithms which make this thing work. It's the
02:30:46 20 intelligence.

02:30:48 21 Anybody can buy microphones. Anybody can buy
02:30:51 22 plastic. Anybody can buy a processor and stick it in a
02:30:55 23 little container. But it's the algorithms, the
02:30:59 24 mathematics, the genius of the software, all brought
02:31:02 25 together onto a single processor so that it can work in

02:31:05 1 this tiny little device, which we'll show you.

02:31:07 2 And a very -- I think it's important to understand
02:31:13 3 that Dr. Li and Dr. Manli Zhu didn't know each other long
02:31:17 4 ago. They both were born and grew up in China, and they
02:31:19 5 wanted to get out of China and live the American dream.

02:31:22 6 They wanted to come to the United States for a
02:31:25 7 fine education, to advance their careers, and to get into
02:31:28 8 research and development in the United States.

02:31:29 9 And that's what they both did. And they both went
02:31:32 10 to American colleges for their Master's and Doctorate. And
02:31:38 11 they both became citizens of the United States. Dr. Li has
02:31:42 12 been a citizen since 1999 and Dr. Zhu since 2018.

02:31:45 13 So this case, as we've heard, is about the '049
02:31:48 14 patent. The '049 patent -- and this is very important to
02:31:53 15 understand -- it issued in 2018, and it shows the
02:31:56 16 inventors, but its date -- its priority date, the date for
02:32:03 17 which you have to consider all prior inventions, its date
02:32:06 18 is September 24, 2010. That's the priority date.

02:32:10 19 So when you hear about prior art, when you hear
02:32:12 20 about any prior art that you should consider to invalidate,
02:32:15 21 it has to be before 2010, because that's the date of
02:32:21 22 invention here. That's the priority date.

02:32:22 23 And it did spring off of the '056 patent, which --
02:32:29 24 the '756 patent, I'm sorry. As the Judge explained during
02:32:32 25 his opening instructions, the '756 patent was the original

02:32:36 1 patent, and then it was subsequent -- subsequently reissued
02:32:40 2 so that broader claims were allowed. And the '756 patent
02:32:44 3 was the original patent.

02:32:46 4 But you'll see on the right side, the filing date,
02:32:49 5 the September 24, 2010, was still the priority date.
02:32:54 6 That's the date we always have to remember when we're
02:32:57 7 considering prior art.

02:32:57 8 Now, these are a sample of the accused Amazon Echo
02:33:03 9 devices. The small Dot, the bigger Echo, those are the
02:33:09 10 smart speakers that you put into your homes that control
02:33:12 11 thermostats, that control Spotify, that allow you to speak
02:33:17 12 to them.

02:33:18 13 They were launched in 2014 by Amazon. But you'll
02:33:21 14 hear lots of evidence throughout this case and you'll see
02:33:23 15 in a moment with some of the exhibits, which we will see
02:33:26 16 later today, that Dr. Li brought his technology to Amazon
02:33:28 17 in 2011 at their invitation, demonstrated it, presented it,
02:33:35 18 gave them all the technology, gave them the paperwork, gave
02:33:38 19 them everything. And then in 2014, three years later, look
02:33:43 20 what they came out with.

02:33:45 21 Now, there was a problem. When you consider
02:33:50 22 invalidity, when you consider whether this was obvious
02:33:53 23 before 2010, consider one thing. This was not an easy
02:33:58 24 task. Amazon will admit, it took them years in their own
02:34:02 25 laboratory to supposedly develop this technology, was

02:34:04 1 something that one of the biggest companies in the world
02:34:09 2 took years to develop, they went to Dr. Li and his small
02:34:11 3 company to try to get the technology. You'll see they also
02:34:15 4 went to many other small companies and investigated and
02:34:18 5 evaluated their technology, as well.

02:34:20 6 The problem was very complex. It's simple to put
02:34:23 7 a microphone in front of a person if you know the person is
02:34:25 8 going to be right in front of the microphone, like I am
02:34:28 9 here, and speak into the microphone. That's easy.

02:34:32 10 But if a microphone sitting in the middle of the
02:34:34 11 back of the courtroom has to hear me say, "Alexa, play
02:34:38 12 Billy Joel," that's not easy.

02:34:40 13 Dr. Li worked on this technology. He had a first
02:34:48 14 product called CrispMic I, which was developed between 2002
02:34:53 15 and 2008, which is not this technology. It's more like the
02:34:56 16 simple old microphone array that you would put on a
02:35:00 17 computer or be sold to ATM machines, to NCR, so it could
02:35:07 18 speak to an ATM machine.

02:35:08 19 But then he decided I want to solve the problem.
02:35:08 20 Because of the way the world is going with the Internet, I
02:35:10 21 want a device that can pick up a sound from anywhere in the
02:35:14 22 room and detect it and recognize it.

02:35:16 23 So what did he do? It took him from 2008 to 2010
02:35:20 24 to develop that product. And he did that with Dr. Manli
02:35:23 25 Zhu, who is an expert at these algorithms, at making

02:35:28 1 hardware work the way you want it to work, something Amazon
02:35:32 2 couldn't do.

02:35:32 3 So infringement. It is our burden, the
02:35:39 4 Plaintiff's burden, to prove infringement by a
02:35:41 5 preponderance of the evidence. No question about that.

02:35:43 6 And as we saw this morning, that means that the
02:35:45 7 Scales of Justice must tip ever so slightly in favor of
02:35:49 8 Vocalife for this jury to find that Amazon, in fact,
02:35:54 9 infringed. And that's what we're going to prove to you.

02:35:56 10 Now, here's a -- the first claim, which is a claim
02:36:00 11 in this lawsuit. And I want to hit on some words because
02:36:03 12 you're going to be hearing these words all week long. And
02:36:06 13 by the end of this jury trial, I think you'll be mini
02:36:10 14 experts on microwave -- microphone arrays.

02:36:13 15 So here are the key words. These are the elements
02:36:15 16 of the claim of this patent. It's a microphone array which
02:36:20 17 has the elements of a sound source localization unit, an
02:36:28 18 adaptive beamforming unit, and a noise reduction unit, all
02:36:31 19 contained in a single processor. That is what this
02:36:35 20 invention is all about.

02:36:36 21 So you're going to be hearing from both the
02:36:38 22 Plaintiff and the Defendant about whether or not the Amazon
02:36:41 23 products have a microphone array with a sound source
02:36:44 24 localization unit, an adaptive beamforming unit, and a
02:36:47 25 noise reduction unit. And you'll hear testimony from many

02:36:50 1 witnesses on that subject.

02:36:52 2 What does a patent cover? Well, a patent is very
02:36:57 3 much like real property, except it's intellectual property.
02:37:01 4 It's a piece of paper. But you have to think of it in
02:37:04 5 terms of a deed.

02:37:05 6 Just like a -- a piece of real estate, if you
02:37:11 7 owned a piece of real estate, it would have boundaries, and
02:37:15 8 your deed would tell you what those boundaries are, and
02:37:18 9 that's your property.

02:37:19 10 Well, the claims of a patent are exactly the same
02:37:21 11 thing. They tell you what the scope of your ownership
02:37:26 12 interest is. What do you own? It's what the claim says
02:37:29 13 you own.

02:37:30 14 And so if you have an oil well and it's on your
02:37:33 15 property, you own it. If it's not on your property, you
02:37:37 16 don't own it.

02:37:37 17 And I believe you'll agree at the end of this
02:37:44 18 trial that the invention of the '049 patent with these
02:37:48 19 elements of microphone array, sound source localization
02:37:50 20 unit, adaptive beamforming unit, noise reduction unit,
02:37:55 21 that's the scope of the property line.

02:37:58 22 And you will find, I hope and I believe, based on
02:38:01 23 the testimony and the evidence you will see, that that is
02:38:03 24 our property, and that Amazon practiced our invention.

02:38:07 25 Now, what -- for what purposes can you use this

02:38:12 1 invention? Well, the patent specification makes clear many
02:38:16 2 examples of the uses of this invention. Those are called
02:38:19 3 the embodiments in the specification.

02:38:21 4 And you'll see here, this is just one example of
02:38:23 5 one embodiment, but what I highlighted was what I wanted
02:38:26 6 you to see, which is that the microphone array system
02:38:30 7 disclosed herein can further be implemented in conference
02:38:35 8 phones, videoconferencing applications, or any device or
02:38:39 9 equipment that needs better speech inputs.

02:38:44 10 In other words, if it's a device like this and it
02:38:46 11 meets the element of the claims, then you are within the
02:38:50 12 scope of what Vocalife owns.

02:38:53 13 And that means that if you want to use that
02:38:56 14 technology, you have to license that technology. You have
02:38:59 15 to pay for that technology. And then it's fair.

02:39:03 16 You'll hear expert testimony in this case from our
02:39:07 17 expert -- technical expert, Joseph McAlexander of
02:39:12 18 McAlexander Sound in Richardson, Texas. Many, many years
02:39:15 19 of audio processing experience.

02:39:17 20 He will offer his expert opinions with respect to
02:39:19 21 how the Amazon Echo products meet each and every element of
02:39:25 22 the asserted method claims when they are used, but -- the
02:39:28 23 microphone array, the sound source localization unit, the
02:39:32 24 adaptive beamforming unit, the noise reduction unit, all in
02:39:36 25 a single digital processor.

02:39:37 1 Now, Amazon denies infringement. You've heard
02:39:40 2 that. You heard that from the moment that selection began
02:39:43 3 this morning.

02:39:44 4 I want to show you, however, some snippets of
02:39:48 5 evidence that you'll see during this trial. I don't want
02:39:51 6 you to just listen to my words. I want you to see snippets
02:39:56 7 of evidence.

02:39:56 8 So Amazon says they don't do sound source
02:40:00 9 localization. That's one of the elements. But here's an
02:40:03 10 Amazon document prepared before the lawsuit, not in answer
02:40:06 11 to the lawsuit, which indicates they're locating the source
02:40:09 12 of speech.

02:40:10 13 Here's another Amazon document written by Amazon
02:40:13 14 witnesses, some of whom will testify in this case, stating
02:40:21 15 expressly that the Echo devices have sound source
02:40:29 16 localization algorithms.

02:40:30 17 They say they don't do adaptive beamforming, but
02:40:30 18 their own documents, their technical documents say they do
02:40:34 19 adaptive beamforming. See the ABF in the middle, well,
02:40:39 20 that's defined in the same document as adaptive
02:40:41 21 beamforming. And you'll hear from our expert witness as to
02:40:44 22 exactly how this is used.

02:40:45 23 Also, beamforming, you can see right on almost
02:40:48 24 every one of these forms, it's there. This is evidence
02:40:52 25 created years ago, before there was any lawsuit.

02:40:55 1 Amazon says they don't determine a delay. But
02:41:01 2 look first and last on the circle. That is the
02:41:03 3 determination of the delay, the delay between microphones,
02:41:08 4 the sensors. Their own documents establish it.

02:41:10 5 Amazon, of course, can't deny they use a circular
02:41:14 6 array because their Echo and their DOT are circular.

02:41:18 7 Amazon concedes that it knows of the '049 patent
02:41:20 8 by at least the date of the filing of the complaint.

02:41:24 9 But you will see much evidence that they knew
02:41:26 10 about this patent years ago, where they were so willfully
02:41:29 11 blind to its existence by closing their eyes that they
02:41:33 12 should be held accountable.

02:41:38 13 And Amazon, of course, knows and intends that its
02:41:40 14 customers use the Echo devices. So they fit within the
02:41:45 15 boundary.

02:41:45 16 Now, this is, to me, the most telling part of our
02:41:48 17 case. Amazon went out into the world in 2011, as you will
02:41:52 18 hear from witnesses, and started to invite companies, small
02:41:55 19 companies, who had a reputation for technology, to come in
02:41:58 20 and demonstrate their technology.

02:42:00 21 And they had a pattern of meeting with these
02:42:03 22 companies. Here's an Amazon document from April of 2011
02:42:07 23 talking about their meetings with two of these speech
02:42:11 24 recognition companies. Their own evidence from 2011.

02:42:13 25 Here are a list of witnesses in this case, who you

02:42:17 1 will hear from, all of whom say that Amazon had a corporate
02:42:23 2 policy to tell its engineers, don't look at patents if
02:42:27 3 people bring patents to your attention. Close your eyes.
02:42:32 4 Corporate policy, deliberate -- deliberately ignore those
02:42:36 5 patents. Corporate policy.

02:42:38 6 And then, of course, Amazon invited Dr. Li to
02:42:43 7 present his technology, which was already the subject of
02:42:46 8 pending patent applications, to them in California at their
02:42:51 9 famous Lab 126.

02:42:52 10 And here's a timeline of the evidence. The first
02:42:55 11 application provisional was filed in September of 2010.
02:43:00 12 Dr. Li takes his prototype technology to the CES show, a
02:43:09 13 famous show in Las Vegas, Nevada, in January of '11.
02:43:09 14 Here's the prototype that he took there. It was not a
02:43:11 15 working prototype, but it demonstrated the technology, and
02:43:12 16 he took it places and demonstrated the technology. He
02:43:15 17 didn't offer this for sale.

02:43:17 18 But after that show, by the way, where he won an
02:43:20 19 award for designing and engineering -- I'll go back for a
02:43:25 20 second and you can see the award in the top left-hand
02:43:28 21 corner -- he's invited by Amazon to come to the lab.

02:43:32 22 And here's the actual original email from Jerry Wu
02:43:37 23 at Amazon. Come to the lab, show us your technology, show
02:43:41 24 us adaptive beamforming, which they now say they don't do.

02:43:44 25 And what did Dr. Li do? He said, of course, I'll

02:43:47 1 come, and he signed a nondisclosure agreement with them.

02:43:50 2 And what does that nondisclosure agreement say?

02:43:53 3 It says: The receiving party may use confidential
02:43:55 4 information only in pursuance of the business relationship
02:44:00 5 with the disclosing party.

02:44:01 6 But they're using that information, and they've
02:44:04 7 never done business with him, and they've never paid him a
02:44:07 8 penny.

02:44:07 9 And look at the next paragraph, Paragraph 6: All
02:44:11 10 confidential information will remain the exclusive property
02:44:14 11 of the disclosing party.

02:44:16 12 Not true.

02:44:17 13 And so what happened? Dr. Li went to the meeting,
02:44:23 14 and he wrote them, and he said, here's what I'm going to
02:44:27 15 demonstrate for you at the meeting, microphone array, noise
02:44:31 16 reduction, echo cancellation. And then down at the bottom,
02:44:36 17 real-time demos of echo cancellation and sound source
02:44:42 18 localization. And that's what he did.

02:44:43 19 And then he gets an email soon before his meeting
02:44:45 20 from Wei Li, an Amazon engineer working, unbeknownst to
02:44:50 21 Dr. Li -- working on the Echo development. By the way,
02:44:51 22 Amazon never told Dr. Li there was any Echo development.
02:44:54 23 They hid that from all of the companies who came in.

02:44:57 24 What does Wei Li write? I'm glad you're coming to
02:45:01 25 showcase your technology. I also recommended your

02:45:03 1 technology to my team. They're quite interested.

02:45:06 2 Why does Amazon need Dr. Li and Li Creative
02:45:10 3 Technologies and these other companies to go out to
02:45:12 4 California and teach them sound source localization,
02:45:17 5 adaptive beamforming, why do they need that if this is
02:45:21 6 obvious, if this is so easy? And then, of course, Dr. Li
02:45:25 7 had pending patent applications.

02:45:26 8 And here's the type -- I've just shown you --
02:45:31 9 you'll hear this later today -- the demonstration that he
02:45:35 10 gave to them. He demonstrated all of these things, and he
02:45:38 11 told them he had 13 filed and two issued patents in his
02:45:44 12 written demonstration. And he taught them echo
02:45:48 13 cancellation and sound source localization.

02:45:51 14 And after the meeting, believe it or not, he said
02:45:54 15 can we have all of that in writing, we like your
02:45:57 16 technology? He said, sure. And he sent it to them. These
02:46:00 17 are premarked exhibits. This is evidence in this case.
02:46:03 18 This isn't lawyers talking. It's evidence.

02:46:05 19 And then the patent application was published on
02:46:11 20 March 29, 2012. And on October 14, 2014, it issued, an
02:46:18 21 issued patent.

02:46:19 22 And look what happens next. Echo launches on
02:46:22 23 approximately November 20, 2014, and Amazon had a big
02:46:26 24 launch party in New York City to celebrate the Echo. And
02:46:30 25 guess who they invited, Dr. Li, believe it or not, and he

02:46:33 1 goes with Manli Zhu, his co-inventor, to the party, and
02:46:36 2 they -- they don't know what Echo is. They've never heard
02:46:39 3 of Echo.

02:46:39 4 They go to the party, and they demonstrate the
02:46:42 5 Echo device that you saw, and he looked at Dr. Manli Zhu
02:46:46 6 and said, that's our invention. That's what we
02:46:48 7 demonstrated to them. We can't believe it.

02:46:52 8 Then they talked to the engineers at that meeting,
02:46:54 9 and they confirmed that it had each and every one of those
02:46:58 10 elements of the claim.

02:47:00 11 Did he make a scene at the meeting? No. But what
02:47:04 12 did he do? Within a short week or two, he writes a letter
02:47:08 13 to the head of the Echo project, and he says: I don't know
02:47:11 14 if you know this, because you weren't at that presentation
02:47:14 15 three years ago, but here's what I presented, and I gave
02:47:17 16 you my files, and I gave you everything, and I went to the
02:47:21 17 event today, and I saw what happened. I think we better
02:47:24 18 sit down and have a meeting. A collaboration would be the
02:47:28 19 best way to resolve this.

02:47:29 20 But did he say, I'm going to sue you for patent
02:47:32 21 infringement? No. He's a businessman. He's an engineer.
02:47:37 22 He's not a lawyer. He didn't threaten them.

02:47:39 23 But when you read this, and you'll be able to take
02:47:42 24 this back into the jury room at the end of the trial,
02:47:45 25 you'll see that he was saying to them, we have a real

02:47:48 1 problem here.

02:47:49 2 And you know what Amazon did? They never
02:47:51 3 responded to that letter, never talked to him again, zero,
02:47:55 4 until the day that Dr. Li sued them for patent infringement
02:47:57 5 in 2019.

02:47:58 6 Damages. I just want to talk briefly. As you
02:48:05 7 heard His Honor say, if you believe there's patent
02:48:07 8 infringement, then the Plaintiff would be entitled to not
02:48:10 9 less than a reasonable royalty.

02:48:12 10 You will hear Amazon say, because their damages
02:48:15 11 expert is going to tell you this, the damages can't be more
02:48:19 12 than \$700,000.00 because there was a time in 2015 when
02:48:23 13 Dr. Li offered to sell Google the '756 patent, not the '049
02:48:27 14 that's in suit, the '756 patent, for \$700,000.00, and that
02:48:32 15 they turned him down.

02:48:33 16 But what you'll hear is, that's not the truth.
02:48:35 17 The truth is there was a deal on Google where you could
02:48:39 18 make a proposal for a sale of the patent, but you still had
02:48:44 19 to learn what the terms were. You still had to negotiate
02:48:47 20 the terms. You still had to sign documents.

02:48:50 21 He did none of that. And it wasn't the '7 -- the
02:48:54 22 '049 patent at all, and Amazon -- nobody had a successful
02:48:57 23 product. This was six months after the launch of Amazon.
02:49:00 24 But their expert will tell you that the whole thing is
02:49:04 25 \$700,000.00.

02:49:05 1 And I believe at the end of this trial you'll see
02:49:07 2 that the damages are much more substantial. You know
02:49:10 3 what's happened, is Amazon has become a huge seller of the
02:49:14 4 Echo device.

02:49:14 5 Our expert, Alan Ratliff, looks at the economic
02:49:18 6 value to Amazon, and he looks at something called the
02:49:21 7 downstream economic value, which is an Amazon number. It's
02:49:24 8 their downstream economic value.

02:49:26 9 And at the end of his analysis, and you'll hear
02:49:29 10 from him, he determines that the price per unit should be
02:49:33 11 between \$1.32 and \$1.65 royalty per unit.

02:49:43 12 Okay. But they've sold 19 million units since
02:49:46 13 this complaint was filed in April of '19. So it adds up to
02:49:49 14 a range between \$25 million and \$31 million.

02:49:53 15 And is that a lot of money? You bet it's a lot of
02:49:56 16 money, but he came up with the invention, and he spent the
02:50:00 17 time and money to get the patent, and he got the patent,
02:50:03 18 and he demonstrated the technology, and he signed an NDA,
02:50:09 19 and they owe him the money.

02:50:10 20 They also claim that there's prior art which
02:50:15 21 invalidates the patent. And you heard from the preliminary
02:50:19 22 instructions that to invalidate a patent, Amazon has the
02:50:22 23 burden to show by clear and convincing evidence, not
02:50:24 24 preponderance, clear and convincing evidence, a heavy
02:50:29 25 burden, that this patent is invalid.

02:50:30 1 Well, you will see when you look at their evidence
02:50:33 2 that it's not even close to meeting any burden.

02:50:37 3 For example, they say that one of Dr. Li's own
02:50:43 4 articles from 2009 on his old microphone, which had nothing
02:50:50 5 to do with the new technology, they say that's invalidating
02:50:54 6 prior art, that this jury should consider it and invalidate
02:50:58 7 it.

02:50:58 8 But look what the Patent Office said in 2019 or
02:51:02 9 2020 in a subsequent application in a different patent
02:51:05 10 application involving the same technology when they looked
02:51:06 11 at the Li article. The examiner said he agrees that, in
02:51:10 12 considering Li alone, Li does not disclose a sound source
02:51:15 13 localization unit which estimates a location of said target
02:51:19 14 sound signal.

02:51:19 15 And the Patent Office allowed these new claims
02:51:22 16 over the Li article. But they're going to ask you, the
02:51:26 17 jury, to say that that Li article invalidates this patent.

02:51:30 18 THE COURT: Five minutes remaining.

02:51:32 19 MR. FABRICANT: Thank you, Your Honor.

02:51:32 20 They have cobbled together a number of items which
02:51:40 21 they would ask the jury to -- to find at the end of the
02:51:43 22 trial proves by clear and convincing evidence that the
02:51:48 23 patent is invalid.

02:51:48 24 You will see how weak their non-infringement
02:51:51 25 defense is because we have the documents and the evidence

02:51:54 1 and the source code and the witnesses to demonstrate that
02:51:57 2 they clearly infringe.

02:51:58 3 So, of course, their entire case is really, can we
02:52:02 4 invalidate the patent? And that's where they will spend
02:52:05 5 their time and effort.

02:52:06 6 So they've put forward the Li article, they've
02:52:09 7 raised -- they've pulled out a textbook called the
02:52:13 8 Brandstein textbook, and they're arguing that the articles
02:52:18 9 in that textbook are invalidating prior art.

02:52:20 10 And then, finally, finally, the last thing they
02:52:23 11 will urge is there was this new patent application that was
02:52:26 12 filed -- it was another reissue of that old 70 -- '756, not
02:52:32 13 a reissue of the patent-in-suit, a reissue of the old '756.

02:52:36 14 And they're arguing that because of that reissue,
02:52:40 15 there's a statement in there that they will tell you, in
02:52:42 16 their opinion, in their view, that this constitutes -- it's
02:52:47 17 somehow an admission that the '049 patent is invalid.

02:52:51 18 But all this is was an attempt to get additional
02:52:55 19 claims on the '756 patent.

02:52:56 20 If you look at the highlighted portion in the
02:52:59 21 first paragraph, they're broadening Claim 1 of the parent
02:53:05 22 application, '756 is broadened as explained in the attached
02:53:10 23 sheet. And then when you go to the attached sheet, it
02:53:14 24 explains that this is a broadening reissue.

02:53:18 25 Dr. Li never said the patent was invalid,

02:53:21 1 Dr. Manli Zhu, who signed this application, never said the
02:53:24 2 patent was invalid.

02:53:25 3 And we believe strongly that you will not find by
02:53:28 4 clear and convincing evidence that any of this constitutes
02:53:32 5 patent invalidity.

02:53:33 6 So at the end of the trial, we're going to have a
02:53:44 7 closing argument, and I'm going to revisit these issues of
02:53:47 8 infringement, and I'm also going to ask you to find willful
02:53:50 9 infringement.

02:53:51 10 Now, that's something different from infringement.
02:53:53 11 To find infringement, it doesn't have to be willful. It
02:53:56 12 can be innocent, and they'd still be liable for damages, if
02:53:59 13 you find out their infringement was innocent.

02:54:03 14 But when it's willful, it's -- it means
02:54:06 15 intentional. It means they knew or should have known,
02:54:10 16 willfully blind to the fact that they were practicing this
02:54:13 17 invention.

02:54:13 18 So I will ask you to find, not only that it was
02:54:17 19 infringed, but that it was willfully infringed. So I'll
02:54:20 20 ask you to check the first box yes -- yes.

02:54:22 21 And then for patent invalidity, we'll ask you to
02:54:25 22 find, no, the patents are not invalid.

02:54:27 23 THE COURT: Two minutes remaining.

02:54:28 24 MR. FABRICANT: Thank you, Your Honor.

02:54:31 25 And then, finally, after the damages analysis is

02:54:37 1 performed by our expert, and you'll hear, of course, the
02:54:37 2 damages testimony of their expert, you'll hear the
02:54:40 3 technical experts' opinions for the Amazon company, but we
02:54:42 4 will ask you to find that, for the time of the infringement
02:54:47 5 up through the date of trial, for the -- for the actual
02:54:50 6 units sold, multiplied by the number of units that were
02:54:53 7 actually sold per unit, the reasonable royalty, the
02:54:58 8 reasonable compensation for Vocalife, for Dr. Li should be
02:55:02 9 in the amount of \$31 million.

02:55:03 10 Thank you very much. We greatly appreciate your
02:55:07 11 service.

02:55:09 12 Thank you, Your Honor.

02:55:11 13 THE COURT: All right. Defendants may now present
02:55:14 14 their opening statement to the jury.

02:55:16 15 Mr. Dacus, would you like a warning on your time?

02:55:19 16 MR. DACUS: Yes, Your Honor, if you would give me
02:55:21 17 a five minute and two minute also, that would be greatly
02:55:24 18 appreciated.

02:55:25 19 THE COURT: I will certainly do that. You may
02:55:27 20 proceed when you're ready.

02:55:29 21 MR. DACUS: Thank you very much.

02:55:30 22 Good afternoon. By way of reintroduction, I'm
02:55:36 23 Deron Dacus. And you met Phil Hilmes from Amazon this
02:55:45 24 morning. You met Dave Hadden. But I want to introduce you
02:55:45 25 to two folks you didn't meet this morning who are part of

02:55:46 1 our team and you'll hear from during the trial. This is
02:55:46 2 Joe Re and Alan Laquer, and you'll hear from both of them
02:55:55 3 during the trial.

02:55:56 4 Now, I want to start this afternoon where we
02:55:59 5 started this morning, and that is to say to you a very
02:56:00 6 sincere thanks for being willing to serve on a jury. These
02:56:03 7 are difficult times.

02:56:05 8 As I told you this morning, we would not be
02:56:07 9 here -- Amazon would not be here if this case was not very
02:56:11 10 important to Amazon. It is very important to Amazon.

02:56:13 11 You may be thinking that because Amazon has been
02:56:19 12 sued on patent infringement, that Amazon is mad at the
02:56:22 13 patent system or that Amazon does not respect the patent
02:56:25 14 system. And I know the men and women who work at Amazon
02:56:28 15 want me to say to you, nothing could be further from the
02:56:31 16 truth. Nothing could be further from the truth.

02:56:34 17 Amazon itself has thousands of patents to protect
02:56:38 18 its technology, but not every piece of technology that
02:56:42 19 Amazon uses or makes is worthy of a -- being patented. And
02:56:47 20 that's -- that's certainly true in this case.

02:56:49 21 Now, from Amazon's perspective, this case involves
02:56:53 22 principles that are absolutely fundamental -- absolutely
02:56:57 23 fundamental to our United States patent system and the jury
02:57:01 24 system that underlies it. And that's -- that's ultimately
02:57:04 25 why they're here.

02:57:05 1 Now, when you heard about this patent system on
02:57:08 2 the Court's video this morning, you got a lot of
02:57:11 3 information. But one thing you heard is our patent system,
02:57:14 4 although the greatest in the world, is not perfect. And
02:57:18 5 when someone accuses you wrongly or falsely of using or
02:57:23 6 infringing their patent, where you come to defend yourself
02:57:28 7 is in front of eight folks in a Federal District Court.
02:57:31 8 And that's why we're here.

02:57:32 9 You also heard that the jury makes the ultimate
02:57:35 10 determination on the validity of a patent, and that's also
02:57:41 11 why we're here, to have you help us and answer both of
02:57:46 12 those two constitutional questions.

02:57:48 13 Now, you heard some preliminary instructions from
02:57:50 14 the Court a minute ago. And one thing that he instructed
02:57:54 15 you on is you're going to have to make determinations on
02:57:57 16 credibility and believability as you go through this case.

02:58:00 17 And I will say to you very candidly, having now
02:58:03 18 heard what the Plaintiffs just said to you over the last 30
02:58:05 19 minutes, you're going to hear two very different versions
02:58:09 20 of the facts in this case.

02:58:10 21 I think that's -- that's a certainty. You're
02:58:14 22 going to have to use, exactly as the Judge told you, your
02:58:18 23 common sense, the things you use in everyday life, to
02:58:22 24 determine what the believable story is, what makes sense to
02:58:26 25 you, and that's going to be a critical part of this case.

02:58:30 1 Now, who are the parties in this case? Who are
02:58:35 2 these folks that you need to determine the facts about?

02:58:39 3 You heard this morning and you heard the opening
02:58:42 4 statement now, related to Vocalife, and you heard a lot of
02:58:44 5 facts. I'm not going to take my time now to say to you
02:58:48 6 some of the facts I think you did not hear and some of the
02:58:52 7 facts that I think you may hear differently as the case
02:58:54 8 goes on, but here's what I'm going to ask you to do. And,
02:58:58 9 that is, I want you to imprint in your mind and remember
02:59:02 10 very vividly what you were told both this morning and in
02:59:06 11 the last 30 minutes. And I want you to compare it to what
02:59:09 12 you hear from the witness stand ultimately from Vocalife.

02:59:12 13 Now, of course, at this table sits Amazon. And we
02:59:15 14 know from jury selection and questionnaires that many of
02:59:18 15 you, maybe all of you, know who Amazon is today. But you
02:59:22 16 may not know where it came from.

02:59:25 17 I mean, Amazon literally was started in 1994 in
02:59:29 18 the garage of this house. The founder had two computers,
02:59:33 19 and he had, at the time, what was a very strange idea.
02:59:38 20 And, that is, to sell books, and at that time only books,
02:59:42 21 on this very new-fangled thing that people didn't know much
02:59:47 22 about called the Internet.

02:59:49 23 Believe it or not, if you have enough gray hair
02:59:51 24 like I do, you remember a time before the Internet. If you
02:59:54 25 don't have quite as much gray hair, you may think it's been

03:00:00 1 around forever.

03:00:01 2 But that was a very novel idea in 1994, to sell
03:00:04 3 books over the Internet.

03:00:05 4 The founder did that, was very successful, and the
03:00:08 5 rest, in some respects, is history.

03:00:10 6 What you see here is a timeline, sort of the
03:00:13 7 evolution of Amazon and where it's gone from its founding
03:00:16 8 in 1994, at least through 2014, and the various pieces of
03:00:23 9 technology that Amazon has been instrumental in creating.

03:00:28 10 And they didn't do it on the backs of folks like
03:00:32 11 Vocalife. They did it on the backs of hard work, hiring
03:00:35 12 the best and brightest engineers and scientists in the
03:00:37 13 United States. And, frankly, in many ways, of following
03:00:43 14 their philosophy of putting the customer first.

03:00:45 15 Now, most importantly on this timeline is this
03:00:50 16 date of November 2014. That's the date that these Echo
03:00:54 17 devices were launched. And these Echo devices use a --
03:00:59 18 what's called an intelligent voice system called Alexa.

03:01:05 19 And, essentially, what Alexa is -- you heard some
03:01:08 20 discussion about it this morning in our jury selection. It
03:01:12 21 operates almost like the human brain. You can talk to
03:01:16 22 these Echos. And through Alexa, she can talk back to you.

03:01:23 23 So Alexa can actually understand what you say. As
03:01:27 24 some example, you can say, "Alexa, tell me the news." It
03:01:30 25 would tell you the news. "Alexa, what's the weather?" It

03:01:34 1 would tell you the weather. This list could be hundreds of
03:01:37 2 thousands of things long.

03:01:39 3 I'll give you just one example very simplified
03:01:41 4 here.

03:01:42 5 (Videoclip played.)

03:01:43 6 MR. DACUS: The Echo and Alexa, I want you to
03:01:54 7 understand this, was created over years of work at Amazon
03:01:58 8 by literally thousands of scientists and engineers. And
03:02:02 9 when I say thousands, that's not an overstatement. That's
03:02:05 10 not an embellishment. That's literally what it required
03:02:10 11 both to develop the Amazon Echo and Alexa and to continue
03:02:14 12 to develop it.

03:02:16 13 I want to take just a few minutes to give you an
03:02:19 14 overview of how the Echo and Alexa work together.

03:02:24 15 So let's just assume that you lived in Dallas.
03:02:28 16 Thankfully, we don't have to, but assume that you did. And
03:02:32 17 assume that you had an Echo. Here's how it would work.

03:02:36 18 If you had an Echo in your house and you said to
03:02:38 19 your Echo, "Alexa" -- which causes the device to wake up --
03:02:44 20 "play the Beatles," it would digitize your speech, send it
03:02:53 21 over the Internet to a computer or data center that is
03:02:55 22 owned by Amazon, one of their thousands of computers, and
03:02:56 23 then the hard work of Alexa would then begin. And for
03:03:04 24 someone like me who's not technical, this -- this is
03:03:06 25 fascinating stuff.

03:03:07 1 So Alexa will -- of course, has to determine what
03:03:15 2 was said to that Echo. So it, through automatic speech
03:03:19 3 recognition, will identify the actual words that were
03:03:22 4 spoken.

03:03:22 5 Then once it identifies the words, "play the
03:03:25 6 Beatles," it will have to actually understand or interpret
03:03:30 7 those words. And it does that through something called
03:03:33 8 natural language understanding.

03:03:35 9 And natural language understanding involves
03:03:38 10 artificial intelligence, machine learning, these things
03:03:43 11 they call -- that Amazon calls neural networks, which
03:03:45 12 basically mimic the neurons in your brain.

03:03:48 13 And, for example, here, Alexa would have to
03:03:52 14 determine when you say, "play the Beatles," are you asking
03:03:55 15 it to mimic the sound of the insect the beetles, are you
03:03:59 16 asking it to play music, are you asking it to play the
03:04:04 17 movie Beetlejuice? What are you asking it to do?

03:04:09 18 So through artificial intelligence, it can
03:04:13 19 actually understand just like we can as humans. And once
03:04:15 20 it does, it passes that along to what Amazon calls skills.
03:04:20 21 And that's -- the skills are actually intended to
03:04:22 22 accomplish what you ask for.

03:04:23 23 In this case, you ask for music. So Amazon will
03:04:26 24 reach out to a third party in this case, a website that
03:04:31 25 supplies the music. The music is transferred to your Echo

03:04:36 1 in Dallas, and the music is played on your Echo.

03:04:39 2 All of that, of course, happens in a split second.

03:04:43 3 It took me several minutes to explain it, but it happens in
03:04:46 4 a split second.

03:04:47 5 And, of course, an important part of that is the
03:04:49 6 Echo itself because the Echo has to always be waiting to
03:04:52 7 hear what's known as the wake-up word, which is Alexa --
03:04:57 8 the name "Alexa." And it has to hear that word in order to
03:05:01 9 transmit the digitized recording to the -- to the Alexa
03:05:07 10 Cloud.

03:05:07 11 So let's talk about these Echos and a little bit
03:05:10 12 of the mechanics of them.

03:05:13 13 This is one of the Echos. This is a cross section
03:05:17 14 of what it looks like on the inside. And this is the part
03:05:20 15 that's important for this case.

03:05:22 16 If you see those seven green circles, those are
03:05:27 17 six microphones on the outside periphery of the Echo and
03:05:32 18 one on the inside. Those microphones are always waiting
03:05:36 19 for the wake-up word. You'll hear that a lot. The wake
03:05:43 20 word "Alexa" to be spoken.

03:05:47 21 But what's important for this case is, each of
03:05:50 22 those -- those microphones, there are six predefined beams
03:05:55 23 that are formed. They are preprogrammed into the Echo at
03:06:00 24 the time it's made. And they're listening in all these
03:06:04 25 directions for this wake-up word to be spoken.

03:06:08 1 And when it is spoken, of course, Alexa wakes -- I
03:06:13 2 mean, the Echo wakes up, transmits the information to the
03:06:18 3 Alexa Cloud.

03:06:19 4 But the important part and the part I want you to
03:06:21 5 remember that you'll hear a lot about is that these beams
03:06:24 6 that are listening are predefined and preprogrammed. And
03:06:29 7 why do I say that's important? Because let's talk about
03:06:32 8 how the '049 patent works.

03:06:35 9 You've been told that the Echo works the same as
03:06:37 10 the '049. So let's talk at a high level whether or not
03:06:39 11 that's accurate.

03:06:40 12 So the '049 patent, rather than having predefined,
03:06:47 13 preprogrammed beams, this patent actually listens for the
03:06:51 14 voice first without pre -- predefined or preformed beams.

03:06:59 15 And then once it hears a voice, it goes through a
03:07:04 16 series of mathematical calculations, very complicated
03:07:09 17 mathematical calculations involving trigonometry, geometry,
03:07:16 18 something called an azimuth angle, what the patent calls
03:07:19 19 delays, and then it forms the beam.

03:07:22 20 So think about how the Echo works with predefined
03:07:26 21 beams. This beam is formed only after these mathematical
03:07:30 22 calculations. And only then after the mathematical
03:07:35 23 calculations, does it listen for the voice. Very different
03:07:38 24 than how Amazon does it. And Amazon does it the way it
03:07:42 25 does primarily because it's important that the Echo always

03:07:46 1 be there available and instantly ready to hear that wake-up
03:07:51 2 word of "Alexa."

03:07:52 3 Now, let's talk about how you're going to go about
03:07:57 4 determining infringement or use of this patent in this
03:08:00 5 case.

03:08:00 6 The Judge has given you some instructions on this.
03:08:05 7 You heard some on the video. But I'm confident that before
03:08:08 8 you came in here this morning, you had probably never done
03:08:11 9 an infringement analysis. You had probably never compared
03:08:17 10 a product to a patent to determine if there was
03:08:20 11 infringement. So I know a lot of this today has been
03:08:23 12 drinking -- like drinking water through a fire hose.

03:08:27 13 So I think it's appropriate to slow down and make
03:08:29 14 sure that we all understand the process. And here's why I
03:08:34 15 think it's important to do this. It's not our job as
03:08:36 16 lawyers just to tell you the answer that we don't infringe.
03:08:39 17 Our job as lawyers is to give you the evidence so that you
03:08:43 18 can make an informed decision when the Judge asks you the
03:08:47 19 question.

03:08:47 20 And I think ultimately the Judge will instruct you
03:08:51 21 that a patent is infringed only if the accused product,
03:08:54 22 that's the Echo, includes each and every element in the
03:08:57 23 patent claim.

03:08:57 24 So what does that mean? You remember the Judge
03:08:59 25 told you a minute ago that when you turn to the back of the

03:09:04 1 '049 patent in your notebook, which you can do when you
03:09:06 2 have some time -- I'm not asking you to do it now -- you
03:09:09 3 will see claims. And they're numbered. It's the last
03:09:14 4 section.

03:09:15 5 And each of that -- those claims contain a lot of
03:09:18 6 words. And those words define the invention. They define,
03:09:22 7 so to speak, the -- the fence around the property.

03:09:26 8 And so each and every element in that claim has to
03:09:30 9 be found in the Echo.

03:09:32 10 I'll give you one simple example to hopefully help
03:09:39 11 explain this. And I'll make a confession to you that I
03:09:42 12 practiced law for about 10 years before I started doing
03:09:45 13 patent cases, and I was trying to figure out exactly how
03:09:48 14 this infringement analysis was to go, and somebody gave me
03:09:54 15 this example and it made sense to me, and that's why I
03:09:55 16 offer it to you.

03:09:56 17 Let's assume that someone had a patent on a soccer
03:10:00 18 ball, and the patent said, it's made of leather, stitched
03:10:04 19 together, filled with air, and round in shape. And let's
03:10:07 20 assume that that patent owner sued the maker of a football.

03:10:11 21 So what the jury would do in that case is the jury
03:10:14 22 would say, well, the football is made of leather, it's
03:10:17 23 stitched together, it's filled with air, but it's oblong in
03:10:22 24 shape, it's not round in shape. And, therefore, there's
03:10:25 25 not infringement.

03:10:26 1 And that's what I think the Court has instructed
03:10:29 2 you and will instruct you, that if every single element or
03:10:33 3 every single subpart of that patent is not met, then there
03:10:37 4 is no infringement. And it makes sense, right? A football
03:10:40 5 is very different from a soccer ball.

03:10:42 6 So how do you take those principles and apply them
03:10:45 7 to the patent in this case? So what you see in yellow
03:10:48 8 highlighted in front of you is Claim 1 from the '049
03:10:50 9 patent.

03:10:51 10 Now, you may remember that this is something that
03:10:53 11 Vocalife's lawyer just showed you was Claim 1. And you may
03:10:57 12 be saying, well, this is a lot longer than what he showed
03:11:00 13 us. And it's true. He didn't -- he didn't show you all of
03:11:04 14 it. I don't know why, but he didn't show you all of the
03:11:07 15 claim.

03:11:08 16 So what you have to determine is, are all of these
03:11:10 17 phrases, all of these words in this claim met?

03:11:14 18 So here it is blown up. And what I want to do is
03:11:18 19 just give you a roadmap, a little bit of a preview of what
03:11:22 20 I think you will hear from the witness stand, you'll
03:11:24 21 certainly hear more than what I'm able to give you now.

03:11:28 22 In the comparison of this Echo product to this
03:11:32 23 '049 patent. And I'll tell you those letters (a) through
03:11:34 24 (f) there on the side in parentheses, those aren't in the
03:11:38 25 patent. We wrote those in here to break this language down

03:11:41 1 because there's a lot of words so that we can identify each
03:11:44 2 subparagraph or element and talk about it so that it
03:11:47 3 hopefully makes a little more sense.

03:11:54 4 Let me give you one example of what I think you'll
03:11:57 5 hear from the witness stand.

03:11:59 6 Amazon will bring Dr. Sayfe Kiaei, who is one of
03:12:05 7 the world's leading acoustic processing experts, and he
03:12:05 8 will testify to you in great detail, probably more detail
03:12:11 9 than you ever wanted, probably more detail than I ever
03:12:14 10 wanted, but the kind of detail that you need to make an
03:12:18 11 informed decision in comparing the patent language to the
03:12:22 12 Echo.

03:12:23 13 So one thing he will say to you is, if you look at
03:12:25 14 this subparagraph or element that we've labeled (c), where
03:12:33 15 it says "determining a delay" -- let me pause and say this,
03:12:35 16 for those of you who are going to take notes, and the Judge
03:12:38 17 says it's not required, what I would suggest to you is or
03:12:42 18 recommend, when Dr. Kiaei takes the stand if you want to
03:12:45 19 open up your notebook, turn to Claim 1 of the '049 or
03:12:49 20 whatever claim he's talking about, you can follow along
03:12:52 21 with him.

03:12:53 22 And what he's going to show you and what the
03:12:56 23 evidence will show you, both from he and from those who
03:13:00 24 testify from Amazon, is that this Element (c), this is the
03:13:08 25 part of the patent where I talked about at a high level

03:13:11 1 earlier where you have to calculate this delay through
03:13:15 2 these mathematical calculations in order if you look at
03:13:17 3 the -- the bottom sentence, there to determine those -- to
03:13:21 4 make a determination of said delay in order to form a beam.
03:13:26 5 So these are the calculations that are made before the beam
03:13:29 6 is formed in order to form the beam.

03:13:31 7 And what you'll find out from the evidence is
03:13:34 8 that's not how Amazon does it. Amazon has these
03:13:38 9 predefined, predetermined beams already in place.

03:13:42 10 And so if you're following along in your notes,
03:13:46 11 and Dr. Kiaei convinces you that, in fact, we don't do it
03:13:48 12 that way, you can just put a little X out beside there.
03:13:53 13 And when you go into the jury room, you'll know from your
03:13:56 14 notes that, in fact, this element or limitation was not
03:14:01 15 met.

03:14:02 16 I'll give you one more example before I move on.

03:14:05 17 There's a step in the patent called performing
03:14:07 18 adaptive beamforming for steering a directivity pattern of
03:14:10 19 said array.

03:14:10 20 This is simply focusing the beam in a certain
03:14:16 21 direction after those mathematical calculations are made.

03:14:20 22 And, again, because Amazon's Echo has predefined,
03:14:24 23 preprogrammed beams, we don't do it in this fashion. We
03:14:29 24 simply do it differently. And because of that, we don't
03:14:32 25 use the '049 invention. We don't infringe their patent.

03:14:36 1 Now, I want to talk about the second question that
03:14:41 2 you're going to be asked, and, that is, whether or not this
03:14:47 3 patent is invalid.

03:14:48 4 You remember from what the Judge said to you this
03:14:51 5 afternoon and what -- the video this morning, patents are
03:14:54 6 supposed to be new. They're supposed to be something that
03:14:56 7 did not exist in the public before the patent was filed.

03:15:00 8 And here, the evidence is going to show you that,
03:15:05 9 in fact, the information in this patent existed before the
03:15:09 10 filing date of 2009.

03:15:15 11 Here's a couple of reasons we know that. And I'll
03:15:17 12 tell you, Dr. Richard Stern, another one of the country's
03:15:22 13 leading experts, is going to testify to you about
03:15:24 14 invalidity. And, again, you should open up the patent and
03:15:27 15 follow along with him as he does.

03:15:30 16 But the reason we know this information in the
03:15:32 17 patent application existed in the public before is for a
03:15:36 18 couple of reasons.

03:15:37 19 In 2009, Dr. Li wrote an article, and it was an
03:15:43 20 article about microphone arrays and speech recognition.
03:15:46 21 And in that article, in the back, he cited, meaning he
03:15:50 22 named, sources that he had looked at. And one of those
03:15:53 23 sources is this textbook right here.

03:15:56 24 This textbook contains a number of articles. It's
03:15:59 25 edited by a man named Brandstein. We know Dr. Li knew

03:16:05 1 about it because he cited it in his own article. And this
03:16:11 2 book contains the information in the '049 patent. As the
03:16:13 3 Court said to you, it's obvious, this information was in
03:16:16 4 the public before the filing of the '049 patent.

03:16:20 5 Now, there's another way we know that and that
03:16:25 6 Dr. Li knew it also and, that is, to look at the patent
03:16:28 7 itself. And we'll -- you'll hear evidence from the stand
03:16:32 8 that when you walk through Dr. Li's patent, there are
03:16:37 9 remarkable similarities between his patent and the
03:16:40 10 information in this Brandstein collection of articles and
03:16:45 11 textbook.

03:16:46 12 The substance -- the words are not exactly the
03:16:49 13 same. I don't mean to imply that. They're slightly
03:16:52 14 changed. But the substance of the '049 patent is the same
03:16:56 15 as, and certainly it's obvious to anyone who had skill and
03:17:00 16 was an expert in this area, that this textbook contained
03:17:06 17 the information that's in the '049 patent.

03:17:08 18 Now, because of that, the patent is invalid.

03:17:12 19 Now, as the Court has instructed you, there are
03:17:14 20 multiple ways that a patent can be invalid. And one way is
03:17:19 21 that what the inventor created, as the Judge said earlier,
03:17:28 22 is inoperative.

03:17:30 23 And here we have information and evidence that
03:17:32 24 you're going to see during the course of this trial, and
03:17:34 25 it's information that comes directly from Dr. Li. And his

03:17:40 1 lawyer just made reference to it, although I want to make
03:17:44 2 sure that you understand exactly what Dr. Li said to the
03:17:46 3 Patent Office.

03:17:46 4 So what you see on the screen is a filing made
03:17:49 5 during this year, 2020, related to, as his lawyer said, the
03:17:59 6 '756 patent. But what's important is the language that
03:18:01 7 Dr. Li was quoting to the Patent Office is also language
03:18:06 8 that is contained in the '049 patent.

03:18:09 9 If we went back and looked at those subparagraphs
03:18:12 10 and you looked at subparagraph (a), what you'll see when
03:18:15 11 you hear this from the witness stand is the subparagraph
03:18:22 12 that Dr. Li is talking to the Patent Office about is
03:18:25 13 actually in the '049 patent.

03:18:26 14 And so what did Dr. Li and his co-inventor,
03:18:31 15 Dr. Zhu, say. Well, first of all, they swore under oath
03:18:34 16 that what they were telling the Patent Office was true.

03:18:37 17 The second thing they told the Patent Office is
03:18:39 18 the original patent is wholly or partly inoperative or
03:18:43 19 invalid.

03:18:44 20 Now, if I heard Mr. Fabricant right, he said they
03:18:49 21 never said that it was invalid. Well, here they swore
03:18:52 22 under oath that that language was invalid by reason of
03:18:55 23 errors, and this is their signature to the Patent and
03:19:01 24 Trademark Office related to the very language that's
03:19:03 25 included in the '049 patent.

03:19:05 1 So you -- again, you don't have to believe me,
03:19:08 2 this is information, evidence, sworn testimony to the
03:19:15 3 Patent Office from the inventors themselves saying that it
03:19:18 4 is inoperative or invalid.

03:19:30 5 I need to pause and talk with you for just a
03:19:33 6 minute about these meetings that were referenced with
03:19:41 7 Amazon.

03:19:42 8 So let me say up front, did Amazon have meetings
03:19:46 9 with Dr. Li? Yes, absolutely they did. But I think where
03:19:46 10 the issue is going to be joined and what you're going to
03:19:49 11 have to ultimately determine is what were those meetings
03:19:50 12 about, and does that Echo contain any of Dr. Li's patented
03:19:57 13 technology?

03:19:58 14 Now, when Dr. Li met with Amazon, the information
03:20:02 15 that he was discussing with Amazon was already public. He
03:20:05 16 had published it in his 2009 article. On the right, you
03:20:10 17 see an excerpt from his website -- from his business Li
03:20:16 18 Creative. So the information that he was sharing with
03:20:18 19 Amazon was public information.

03:20:21 20 The question is -- or at least one of the
03:20:24 21 questions is, was that information that he shared in those
03:20:28 22 meetings something that Amazon didn't know? You were just
03:20:32 23 told by Vocalife's lawyer that Amazon learned something,
03:20:38 24 and what they learned they took and put in an Echo.

03:20:41 25 THE COURT: Five minutes remaining.

03:20:44 1 MR. DACUS: Thank you, Your Honor.

03:20:44 2 What I'm going to tell you is nothing could be
03:20:47 3 further from the truth. And you're going to have to make
03:20:50 4 that decision.

03:20:53 5 Here's some evidence you're going to see. This is
03:20:53 6 a document from notes at Amazon taken at the time back in
03:20:58 7 2011. No one who wrote these notes ever thought they'd see
03:21:01 8 the light of day in a courthouse, of course.

03:21:03 9 But what did they say about that meeting with
03:21:05 10 Dr. Li? Not impressed with Li Creative. And then they
03:21:10 11 say: We will evaluate Audience, 10/24. Audience is
03:21:14 12 another company they were going to meet with.

03:21:16 13 So at the time, they weren't saying, oh, Dr. Li
03:21:19 14 has this revolutionary invention and stuff we need for the
03:21:25 15 Echo. To the contrary, they said not, impressed.

03:21:25 16 And it's not surprising because what they didn't
03:21:30 17 tell you is Dr. Li went all around the country shopping
03:21:33 18 these ideas to all these companies, Apple, Cisco, Samsung,
03:21:39 19 TiVo. Nobody wanted it. Nobody bid on this stuff. It
03:21:42 20 just wasn't stuff that people needed, and it wasn't
03:21:46 21 something that was new.

03:21:47 22 One other thing they didn't tell you, in 2013,
03:21:52 23 Dr. Li actually applied for a job at Amazon in this same
03:21:57 24 area of speech recognition.

03:21:58 25 And, again, rather than Amazon saying, hey,

03:22:00 1 Dr. Li, he has stuff that we need, when you see the
03:22:03 2 evidence in this case, and what you see in front of you are
03:22:07 3 notes that were taken by Rohit Prasad, and Mr. Prasad will
03:22:13 4 testify in this case, he said, look, this -- this guy, he
03:22:17 5 doesn't -- he doesn't have anything that we need. He
03:22:19 6 appears -- all he wants to do is sell his business to us,
03:22:24 7 but -- but we don't need it.

03:22:26 8 So did they meet with Dr. Li? Yes. Did they
03:22:30 9 learn anything from him? No. Did they take his technology
03:22:34 10 and include it in the Echo? Absolutely not. Absolutely
03:22:38 11 not.

03:22:39 12 And I -- I know counsel for Vocalife showed you
03:22:44 13 these notes about these other companies that we supposedly
03:22:48 14 met with. You'll -- you'll hear from the witness stand
03:22:50 15 that Amazon as one of the leading technology companies in
03:22:56 16 the world, as you very well might expect, meets with dozens
03:23:01 17 and dozens of small companies. We're always trying to
03:23:03 18 improve the technology at Amazon.

03:23:05 19 In fact, one of those companies that he showed
03:23:07 20 you, Amazon actually bought for a lot of money. So when
03:23:10 21 folks bring stuff to us, technology to us, that has value,
03:23:15 22 that is something new, Amazon recognizes it, and many times
03:23:19 23 buys it. But when you don't bring something new, they
03:23:22 24 don't.

03:23:23 25 Now, let me close by talking a little bit about

03:23:27 1 this -- these damages issues. And I'm --

03:23:30 2 THE COURT: You have two minutes remaining.

03:23:31 3 MR. DACUS: Thank you, Your Honor.

03:23:32 4 Amazon certainly does not believe they owe these
03:23:38 5 folks a dime because we don't -- we don't use the '049
03:23:41 6 patent.

03:23:42 7 But here's what I want to ask you to do when you
03:23:44 8 listen to the evidence about damages. Often, damages can
03:23:47 9 tell you what lawsuits are really about. And I know
03:23:52 10 they've stood up here and told you what -- what they want
03:23:54 11 you to believe it's about, but the damages portion can tell
03:23:58 12 you what it's really about.

03:23:59 13 And, also, when you're judging credibility, if you
03:24:03 14 listen to how they get to this \$31 million ultimately, I
03:24:09 15 think that will tell you a lot about credibility not only
03:24:15 16 in the damages case but the entirety of the case.

03:24:16 17 Over the next week and a half, we're going to have
03:24:19 18 the opportunity to present evidence to you. We certainly
03:24:22 19 look forward to that opportunity. We'll have an
03:24:25 20 opportunity at the end to talk to you in closing. Until
03:24:29 21 that time, I appreciate very much your attention this
03:24:32 22 afternoon, and look forward to the next week and a half.

03:24:34 23 Thank you, Your Honor.

03:24:37 24 THE COURT: All right. Ladies and gentlemen,
03:24:38 25 you've heard opening statements for counsel for -- from

03:24:42 1 counsel for the parties.

03:24:44 2 Counsel, at this time, let me inquire, does either
03:24:46 3 party wish to invoke the Rule?

03:24:48 4 MS. TRUELOVE: Plaintiff does, Your Honor.

03:24:49 5 MR. DACUS: Defendant does, Your Honor.

03:24:52 6 THE COURT: And am I correct in assuming that that
03:24:54 7 would exclude expert witnesses but apply to other
03:24:58 8 witnesses?

03:24:59 9 MS. TRUELOVE: Yes, that's correct.

03:25:00 10 MR. DACUS: Yes, Your Honor.

03:25:02 11 THE COURT: All right. Then the Rule has been
03:25:05 12 invoked, not including expert witnesses.

03:25:07 13 If you are a fact witness in this case and not an
03:25:13 14 expert witness, you are not permitted to remain in the
03:25:16 15 courtroom until the time you are called to testify. Expert
03:25:19 16 witnesses are exempt from this application of the Rule and
03:25:23 17 may be present, as are corporate representatives.

03:25:25 18 All right. At this point, ladies and gentlemen,
03:25:30 19 we're ready to proceed with the Plaintiff's case-in-chief
03:25:33 20 and hear from their first witness.

03:25:35 21 But before we do that, we're going to take a short
03:25:37 22 recess. And this is one of those times when I'm going to
03:25:40 23 tell you -- I don't expect us to be out of the courtroom
03:25:45 24 very long, so you may simply close and leave your notebooks
03:25:49 25 in your chairs when you go to the jury room for recess.

03:25:54 1 As you do, remember all the instructions I have
03:25:54 2 given you, including not to discuss the case among
03:25:55 3 yourselves, and I expect to be back in here in 10 or so
03:25:58 4 minutes.

03:25:58 5 So, with that, the jury is excused for recess.

03:26:01 6 COURT SECURITY OFFICER: All rise.

03:26:02 7 (Jury out.)

03:26:03 8 THE COURT: The Court stands in recess.

03:45:27 9 (Recess.)

03:45:30 10 (Jury out.)

03:45:31 11 COURT SECURITY OFFICER: All rise.

03:45:31 12 THE COURT: Be seated, please.

03:45:32 13 Mr. Fabricant, is the Plaintiff prepared to call
03:45:38 14 its first witness?

03:45:39 15 MR. FABRICANT: Yes, Your Honor, the Plaintiff is
03:45:41 16 prepared.

03:45:41 17 THE COURT: All right. Let's bring in the jury,
03:45:46 18 please.

03:45:46 19 COURT SECURITY OFFICER: Yes, sir.

03:46:13 20 (Jury in.)

03:46:15 21 THE COURT: Please be seated.

03:46:17 22 Plaintiff, call your first witness, please.

03:46:28 23 MR. FABRICANT: Your Honor, we call to the stand
03:46:30 24 as our first witness, Dr. Qi "Peter" Li.

03:46:38 25 THE COURT: All right. Dr. Li, if you'll come

03:46:44 1 forward and be sworn by our courtroom deputy, please.

03:46:47 2 (Witness sworn.)

03:46:47 3 THE COURT: Please come around, sir, have a seat
03:46:55 4 at the witness stand.

03:47:03 5 Counsel, you may proceed.

03:47:13 6 MR. FABRICANT: Thank you, Your Honor.

03:47:13 7 QI "PETER" LI, PLAINTIFF'S WITNESS, SWORN

03:47:13 8 DIRECT EXAMINATION

03:47:14 9 BY MR. FABRICANT:

03:47:14 10 Q. Dr. Li, what is your formal full name?

03:47:21 11 A. Qi Li.

03:47:23 12 Q. And are you known by any other name in your business?

03:47:26 13 A. Peter Li.

03:47:29 14 Q. When did you get the name Peter Li?

03:47:33 15 A. When I came to the United State.

03:47:37 16 Q. And, Dr. Li, do you, I understand, have a hearing
03:47:41 17 problem?

03:47:41 18 A. Yeah, I have hear problem. So when you talk, please be
03:47:46 19 close to the microphone.

03:47:47 20 Q. I will try.

03:47:48 21 Dr. Li, what is your relationship with the
03:47:54 22 Plaintiff in this case, Vocalife LLC?

03:47:56 23 A. I'm the owner and the president of Vocalife LLC.

03:48:02 24 Q. Now, Dr. Li, where were you born?

03:48:07 25 A. I was born in Beijing, China.

03:48:13 1 Q. And where did you go to school?

03:48:14 2 A. I went to Hebei University of Science and Technology.

03:48:23 3 Q. And where is Hebei University?

03:48:26 4 A. Hebei, China.

03:48:28 5 Q. Did you obtain a degree from Hebei University?

03:48:32 6 A. I got my Bachelor's degree in electrical engineering.

03:48:34 7 Q. And did you take any subsequent formal education,

03:48:37 8 Dr. Li?

03:48:37 9 A. Yes.

03:48:38 10 Q. And what -- what was -- what other colleges did you

03:48:41 11 attend?

03:48:42 12 A. I got my Master's degree in electrical engineering from

03:48:52 13 Northeastern University in Boston, Massachusetts.

03:48:54 14 Q. And what year did you get your Master's degree?

03:48:56 15 A. 1995 -- 1985, I'm sorry.

03:49:02 16 Q. Did you get any subsequent education?

03:49:07 17 A. Yes. I got my Ph.D. in electrical engineering from

03:49:13 18 University of Rhode Island.

03:49:15 19 Q. And what year did you get your Ph.D.?

03:49:18 20 A. 1996.

03:49:19 21 Q. I take it you were living in the United States during

03:49:24 22 this period?

03:49:25 23 A. Right.

03:49:25 24 Q. Did you take any employment during these years while

03:49:29 25 you were going to college in the United States?

03:49:30 1 A. After I got my Master's degree, I worked for a company
03:49:39 2 for six years -- six years.

03:49:43 3 Q. What company was that?

03:49:44 4 A. It's Factory Mutual Engineering & Research in Boston
03:49:51 5 area.

03:49:52 6 Q. When did you actually move to the United States?

03:49:54 7 A. In December of 1985.

03:49:57 8 Q. Did you bring any family with you?

03:50:00 9 A. My wife joined me one year later.

03:50:04 10 Q. And, Dr. Li, why did you come to the United States?

03:50:08 11 A. I left the communist country to come here for
03:50:16 12 freedom -- for my ultimate dream.

03:50:22 13 Q. And where are you a citizen today?

03:50:26 14 A. I'm proud to be a citizen of United States.

03:50:29 15 Q. And when did you become a U.S. citizen?

03:50:32 16 A. February 9th, 1999.

03:50:35 17 Q. Did you take any employment at any other companies?

03:50:42 18 A. Yes.

03:50:43 19 Q. What was the next company you worked for?

03:50:46 20 A. I worked at AT&T and then Bell Labs, Lucent
03:50:54 21 Technologies.

03:50:54 22 Q. Where is Bell Labs located?

03:50:56 23 A. Murray Hill, New Jersey.

03:51:00 24 Q. And what -- what is Bell Labs? Can you please tell the
03:51:06 25 jury?

03:51:07 1 A. Well, it's one of the most wonderful, most famous
03:51:09 2 research lab of engineering in the world. It has 13 Nobel
03:51:20 3 Prize winners. Many of the technology in the world even
03:51:20 4 today were invented by Bell Labs. When I was a student at
03:51:30 5 school, many of this knowledge I learned from textbook that
03:51:36 6 was from Bell Labs.

03:51:38 7 Q. Dr. Li, do you -- do you know why it's called Bell
03:51:41 8 Labs?

03:51:41 9 A. So it's after the name of Alexander Graham Bell. He
03:51:52 10 invented telephone.

03:51:54 11 Q. And what did you think about getting a job at Bell Labs
03:52:04 12 when you got that position?

03:52:04 13 A. I was so excited. After 11 years of work, full-time
03:52:10 14 work, part-time study, full-time study, part-time work,
03:52:14 15 finally, I realize I got the first part of my American
03:52:19 16 dream. I was so excited to -- to be able to work with
03:52:24 17 Nobel Prize winners, the top research scientists, to know
03:52:30 18 the best knowledge to invent the new technologies.

03:52:35 19 Q. Dr. Li, once you started work at Bell Labs, what type
03:52:38 20 of work were you personally doing there?

03:52:40 21 A. I work acoustics, speech recognition, speaker
03:52:47 22 recognition, voice control, that kind of technologies.

03:52:53 23 Q. And did there come a time when you left Bell Labs?

03:52:58 24 A. Yes. I left Bell Labs in 2002.

03:53:02 25 Q. And why did you leave Bell Labs?

03:53:04 1 A. I remember I have the second dream. I want to be an
03:53:11 2 inventor. So I want to have my own -- the owner of my own
03:53:15 3 company, so I have more freedom to do more inventions to
03:53:19 4 develop new technology and new products. I want to
03:53:27 5 contribute my knowledge to the society to develop new
03:53:31 6 product, new technology, to benefit people.

03:53:34 7 Q. So did -- did you go to work at -- at a different
03:53:36 8 company?

03:53:38 9 A. After Bell Labs, I opened my own company.

03:53:42 10 Q. And what was your own company called?

03:53:43 11 A. My own company called Li Creative Technologies.

03:53:51 12 Q. Why did you call it Li Creative?

03:53:54 13 A. In the beginning, I want to follow Bell Labs. I want
03:53:59 14 to use the name Li Labs. And also in New Jersey, there was
03:54:04 15 another famous lab, Edison Labs, but my colleagues gave me
03:54:11 16 suggestion that if you use labs, you don't have products,
03:54:16 17 you're just the research.

03:54:18 18 So -- so I put creative in the company name, call
03:54:22 19 it Li Creative Technologies.

03:54:24 20 Q. Now, Dr. Li, does Li Creative Technologies exist today?

03:54:29 21 I'm sorry, you couldn't hear.

03:54:31 22 Does Li Creative Technologies exist today?

03:54:33 23 A. Yes.

03:54:34 24 Q. And who is the owner of that company?

03:54:36 25 A. I'm the owner of that company.

03:54:39 1 Q. And what does that company do?

03:54:42 2 A. We do a lot of work for the U.S. Government. We
03:54:49 3 develop technology to support the soldiers in the war.

03:54:54 4 Q. Does Li Creative Technologies have any relationship
03:54:58 5 with the Plaintiff, Vocalife?

03:55:00 6 A. Vocalife is a spin-off of Li Creative Technologies. I
03:55:09 7 said Li Creative Technologies is doing research and the
03:55:13 8 development work, work on a lot of research contracts, work
03:55:19 9 on different research entities. And microphone technology
03:55:23 10 is one -- has matured, so we have that part of technology
03:55:29 11 off, to be a spin-off, to be its own company, to sell
03:55:34 12 products to license technology to other companies.

03:55:38 13 Q. Dr. Li, does Vocalife have any products today?

03:55:40 14 A. Yes. Vocalife has a product called CrispMic II.

03:55:48 15 Q. Dr. Li, I believe you have a physical exhibit with you,
03:55:52 16 Plaintiff's Exhibit 644; is that correct? Is that -- do
03:55:57 17 you have the physical exhibit?

03:55:59 18 A. Oh, yes.

03:56:00 19 Q. And what -- could you -- could you tell the jury what
03:56:03 20 is Plaintiff's Exhibit 644?

03:56:04 21 A. PTX-644?

03:56:08 22 Q. Yes, please --

03:56:10 23 A. That's the -- that's the CrispMic microphone.

03:56:14 24 Q. All right. What is the Crisp microphone? Could you
03:56:19 25 describe it, please?

03:56:19 1 A. I'll be happy to describe that. Half of this surface,
03:56:23 2 you can see four holes. That's four microphone components
03:56:28 3 under that. We call that microphone array, since it's more
03:56:34 4 than one microphones.

03:56:37 5 And you can see, this is a circle. So we also
03:56:41 6 call this a circular microphone array. And the inside of
03:56:46 7 this device, there is a regular circuit board. You will
03:56:53 8 see it light up as a green-colored board.

03:56:55 9 And we'll have a microphone surface mounted on the
03:56:58 10 board. And there is a processor -- digital signal
03:57:05 11 processor under the board to do all the communication to
03:57:08 12 make this device to be intelligent.

03:57:11 13 Q. Now, Dr. Li, can you describe -- how does that device
03:57:15 14 work? If you put it on a table, what does it do? How does
03:57:19 15 it work?

03:57:20 16 A. Right. This device is to support far-field speech
03:57:29 17 recognition and far-field recording. The microphone, which
03:57:33 18 we're using now, is called close-talking microphone. It
03:57:36 19 cannot catch your words in far distance.

03:57:39 20 So based on my appearance, based on the market, we
03:57:43 21 develop this new technology so people could talk -- talk
03:57:47 22 anywhere in the room in any directions and also in
03:57:54 23 different distances. Either you are far away from the
03:57:57 24 microphone, the mic can still capture your voice with very
03:58:01 25 good sound quality to support speech recordation. It's

03:58:06 1 called automatic speech recordination.

03:58:10 2 Why is this important? Because when you're far
03:58:12 3 away from microphone, the microphone won't pick up
03:58:15 4 background noise, and for speech recognition software, we
03:58:21 5 need this kind of technology to capture words from
03:58:24 6 different directions, also give you very good sound
03:58:27 7 quality, voice quality, so speech recognition behind that
03:58:33 8 can give you real high accuracy to be able to do the things
03:58:36 9 which you --

03:58:37 10 Q. Dr. Li, I would like to show you Plaintiff's Exhibit
03:58:43 11 564. 564?

03:58:44 12 A. Yes.

03:58:47 13 Q. Can you explain what Plaintiff's Exhibit 564 is?

03:58:54 14 A. Yes. This -- this kind of document, we'll call it a --
03:58:58 15 a data sheet for the product and technology introduction.

03:59:05 16 Q. Are the features of the CrispMic data sheet listed
03:59:09 17 anywhere on this document?

03:59:10 18 A. Yes, I can see that.

03:59:11 19 Q. Where are they listed?

03:59:13 20 A. So the PCB board, the picture, you can see the inside
03:59:19 21 of this device.

03:59:20 22 Q. And what is that -- you called it a PCB board that's
03:59:24 23 circled on the right side in the middle? Is that what you
03:59:28 24 call it?

03:59:29 25 A. Yes. You can see -- that's good. Thank you.

03:59:32 1 You can see four black box that -- second
03:59:39 2 column -- microphones, four microphones, and you'll see
03:59:43 3 eight light points. Those are LED lights.

03:59:50 4 Q. And what -- at the top, the document says: CrispMic II
03:59:59 5 Developer Module. What is a developer module?

04:00:06 6 A. We have -- actually two products for this particular
04:00:10 7 developer module. That's what we sell to business -- to
04:00:16 8 companies that use our module inside of their device to
04:00:19 9 support far-field speech recognition.

04:00:22 10 Q. How would someone else use your developer module inside
04:00:26 11 their device? How would that work?

04:00:28 12 A. So their device, whatever device it is, it can capture
04:00:33 13 voice from distance, and to promote real high speech
04:00:39 14 recognition accuracy.

04:00:39 15 Q. The CrispMic product that you showed us first,
04:00:52 16 Exhibit 644, do you sell that to anyone today?

04:00:58 17 A. Yes.

04:00:58 18 Q. Who do you sell that to?

04:01:00 19 A. We sell that to three kind of customers. Number one,
04:01:04 20 the U.S. Government, the IRS, they purchase 1,800 of this
04:01:11 21 device for their office nationwide. So next time when you
04:01:16 22 visit IRS office, you will see this microphone sit on the
04:01:22 23 table to support you for better service. That's the first
04:01:28 24 kind of customer.

04:01:29 25 Second, the customer that uses the microphone, the

04:01:34 1 PCB board in their device, that's second customer for -- to
04:01:38 2 support their products. We have one customer that just
04:01:42 3 ordered last week 400 of this board for further evaluation
04:01:48 4 because of the -- people don't want touch buttons, people
04:01:54 5 just want to talk. So our device supports that, that's the
04:01:59 6 second.

04:01:59 7 Q. Dr. Li, Exhibit 564, Plaintiff's Exhibit 564, to whom
04:02:05 8 is this document available? To whom is this document
04:02:11 9 available? Who can see this document?

04:02:12 10 A. People can order this document from Vocalife.

04:02:16 11 Q. Where would they obtain --

04:02:18 12 A. Order this product, I'm sorry.

04:02:19 13 Q. What about the document, where is the document
04:02:22 14 available to see?

04:02:23 15 A. The document is available on the company's website that
04:02:30 16 people can download the document. So most time -- most of
04:02:34 17 the time, our customer, they want to see the document first
04:02:38 18 before they place order.

04:02:45 19 MR. FABRICANT: If you would bring up Plaintiff's
04:02:50 20 Exhibit 205.

04:02:51 21 Q. (By Mr. Fabricant) And what is -- what is shown in
04:02:57 22 Exhibit 205, Dr. Li?

04:02:57 23 A. That's the PCB board, CrispMic enclosure. We also call
04:03:02 24 this developer module.

04:03:04 25 Q. What are the features of the CrispMic II product as to

04:03:10 1 the elements of your '049 patent, how do they compare?

04:03:15 2 A. We call this far-field microphone. The inside of that,
04:03:21 3 the technology supported this far-field, including
04:03:26 4 microphone array, as you see here more than one
04:03:31 5 microphones, adaptive beamforming, sound source
04:03:37 6 localization unit, noise reduction.

04:03:39 7 Q. And what type of processor is in there?

04:03:41 8 A. We are using -- inside here?

04:03:43 9 Q. Yes.

04:03:43 10 A. We have an ARM processor, which are very popular today.
04:03:48 11 It's a general purpose processor. We program that for each
04:03:51 12 of those signal processing.

04:03:53 13 Q. What is the typical price of the CrispMic II that
04:03:58 14 Vocalife sells?

04:04:00 15 A. For -- to buy the -- the developer module is \$99.00,
04:04:06 16 but when they place in volume, the price will be coming
04:04:12 17 down.

04:04:12 18 Q. Where is Vocalife's office located?

04:04:14 19 A. Located in Plano, Texas.

04:04:18 20 Q. And how many employees does Vocalife have in Plano,
04:04:22 21 Texas?

04:04:22 22 A. We have two local engineers.

04:04:26 23 Q. And what type of work do they do?

04:04:28 24 A. They do R&D work, research and developmental work.

04:04:35 25 Q. Why did you locate your -- your business, Vocalife, in

04:04:39 1 Plano, Texas?

04:04:39 2 A. We have been collaborative with Professor Johansson in
04:04:47 3 University of Texas, Dallas, for many years.

04:04:50 4 And during our collaboration, I got a chance to
04:04:56 5 work with his students and engineers in Texas. I was
04:05:03 6 impressed. So for that reason, we open office in here, in
04:05:09 7 Plano, Texas.

04:05:11 8 Q. Dr. Li, I'd like to bring up Plaintiff's Exhibit No. 1.

04:05:15 9 Can you identify Plaintiff's Exhibit No. 1?

04:05:19 10 A. Yes.

04:05:20 11 Q. What is that?

04:05:20 12 A. That's our '049 patent.

04:05:24 13 Q. And when was Plaintiff's Exhibit No. 1 issued?

04:05:28 14 A. Issued in September 18, 2018.

04:05:33 15 Q. When was the first application which relates to the
04:05:38 16 '049 filed?

04:05:39 17 A. The provisional application filed on September 24th,
04:05:45 18 2010.

04:05:46 19 Q. And what is your understanding, as one of the
04:05:51 20 inventors, as to the meaning of the September 24, 2010,
04:05:56 21 date?

04:05:57 22 A. We understand that from that date, our invention has
04:06:05 23 been protected.

04:06:06 24 Q. What do you mean by protected?

04:06:08 25 A. Just means nobody else can use our invention without

04:06:14 1 licensing that from us.

04:06:15 2 Q. Can you describe what you believe the invention covers
04:06:25 3 of the '049 patent?

04:06:28 4 A. So it covers everything really in the device. So it
04:06:35 5 cover the physical technology components, microphone array,
04:06:42 6 sound source localization, adaptive beamforming, noise
04:06:47 7 reduction.

04:06:48 8 Q. And do you have a name for this technology? What do
04:06:52 9 you call it?

04:06:52 10 A. Yes. We call it a far-field microphone.

04:06:55 11 Q. Now, when you formed Li Creative Technologies, where
04:07:06 12 was that company located?

04:07:07 13 A. In Florham Park, New Jersey.

04:07:15 14 Q. And did you have any employees at Li Creative?

04:07:18 15 A. Yes.

04:07:18 16 Q. Do you remember any of their names?

04:07:19 17 A. Yes. The first employee which we hired, his name is
04:07:29 18 Wei Li.

04:07:29 19 Q. And his last name is Li, like your name?

04:07:33 20 A. Yes.

04:07:34 21 Q. Is he any relation to you?

04:07:38 22 A. No.

04:07:39 23 Q. Common name in China?

04:07:40 24 A. He came from China.

04:07:42 25 Q. Is it a common name there, Li?

04:07:44 1 A. Yes, about 10 percent of Chinese with the last name Li.

04:07:49 2 Q. And how did you come to hire Wei Li as your first
04:07:55 3 employee at Li Creative?

04:07:56 4 A. He graduated from University of Beihang. His advisor
04:08:08 5 recommended him to me.

04:08:09 6 Q. Did you know him before you interviewed him?

04:08:11 7 A. No.

04:08:12 8 Q. And when he joined Li Creative, what type of projects
04:08:15 9 was Wei Li working on?

04:08:16 10 A. He work on project linear microphone array, later
04:08:27 11 become a product we call CrispMic I.

04:08:29 12 Q. And can you explain the -- the features of CrispMic I?

04:08:37 13 A. CrispMic I, that's a -- a very special array but a
04:08:46 14 special design for computer monitors and for ATMs. It's
04:08:51 15 limited for people can only talk in the front of the
04:08:56 16 device. It can click on the screen, and you can just talk
04:08:59 17 in that direction.

04:09:02 18 It does not support far-field, does not support
04:09:08 19 sound source localization, does not support people talk
04:09:13 20 from any direction in a room. There was -- is no adaptive
04:09:19 21 beamforming in that device.

04:09:20 22 Q. I'd like to show you Exhibit 273, Plaintiff's Exhibit
04:09:26 23 273.

04:09:26 24 Can you tell me what this exhibit is, Dr. Li?

04:09:31 25 A. Yes. This is a paper which we published in the

04:09:39 1 conference, and as you'll see the picture, that's a
04:09:43 2 CrispMic I. And when the picture is clear, it can be
04:09:49 3 clipped on top of computer monitor to support speech
04:09:54 4 recognition.

04:09:54 5 Q. Now, Dr. Li, you were in the courtroom during the
04:09:58 6 opening -- opening statements today; is that true?

04:10:00 7 A. Yes.

04:10:00 8 Q. And you heard the opening statement of Amazon's
04:10:03 9 counsel?

04:10:04 10 A. Right.

04:10:05 11 Q. And I believe he put up on the screens this article?

04:10:10 12 A. Right.

04:10:11 13 Q. This article, is it the same article?

04:10:13 14 A. Yes.

04:10:13 15 Q. So my question, is how does CrispMic I, which is
04:10:20 16 depicted in the article, compare to what is in your '049
04:10:26 17 patent?

04:10:26 18 A. That's a totally different. This is designed for
04:10:31 19 different application. It's used different technology. As
04:10:36 20 I said, there's no sound source localization, there's no
04:10:41 21 adaptive beamforming, there's no circular array in this
04:10:44 22 device. It's totally different.

04:10:48 23 Q. Is that a picture in Figure 1 of the CrispMic I?

04:10:54 24 A. Right.

04:10:54 25 Q. And what does it say under the photograph?

04:10:58 1 MR. FABRICANT: If you'd show the sentence or two
04:10:59 2 under the photograph, please.

04:11:00 3 A. In this paper, we present a portable microphone array
04:11:05 4 device, named CrispMic, where both the size and performance
04:11:10 5 have been properly addressed.

04:11:14 6 Q. (By Mr. Fabricant) So that was the subject of your
04:11:16 7 article --

04:11:17 8 A. Right.

04:11:19 9 Q. -- CrispMic I?

04:11:21 10 Now, what else did you do at Li Creative with
04:11:31 11 respect to the development of microphone arrays?

04:11:33 12 A. We developed prototype using circular microphone array.
04:11:40 13 We called this VoiceFocus.

04:11:43 14 Q. VoiceFocus, is that the name?

04:11:45 15 A. That's right.

04:11:45 16 Q. And when did you start the development of the
04:11:48 17 VoiceFocus prototype?

04:11:50 18 A. From 2008.

04:11:55 19 Q. And who worked on the development of the VoiceFocus
04:11:59 20 prototype?

04:12:00 21 A. Dr. Manli Zhu.

04:12:01 22 Q. And did you work on that, as well?

04:12:05 23 A. Yes.

04:12:06 24 Q. And what -- what was the -- what was the subject --
04:12:11 25 what were you trying to accomplish with the VoiceFocus

04:12:15 1 prototype?

04:12:16 2 A. As I said, since I have been working in the field of
04:12:20 3 microphones for many years, I collected feedback from our
04:12:25 4 customers.

04:12:26 5 So the CrispMic I can only support speaker talking
04:12:29 6 one. We'll have customers asking us why not develop a
04:12:34 7 product people can talk from different directions, from
04:12:37 8 far-field, from distance, while it can also support good
04:12:42 9 speech recognition.

04:12:42 10 So that's the reason we started work on that
04:12:48 11 product. We understand for the future, there will be a lot
04:12:52 12 of applications for this kind of technology and device.

04:12:57 13 Q. Dr. Li, can you characterize how easy or difficult the
04:13:03 14 development of the VoiceFocus was?

04:13:06 15 A. Yes. It took us several years to design and develop
04:13:14 16 the product, and the first idea how to -- how to do that,
04:13:21 17 but later, Dr. Manli Zhu, she spent a lot of time to
04:13:27 18 develop all these algorithm and software and the hardware
04:13:35 19 together to build a device.

04:13:37 20 It was not easy for small businesses. We have
04:13:41 21 limited people. But, surprisingly, we got out the device
04:13:46 22 designed and developed, and now it's available for
04:13:49 23 customer.

04:13:50 24 Q. And did you actually ever sell a VoiceFocus device?

04:13:55 25 A. For the VoiceFocus, we didn't sell that. We build a

04:14:02 1 prototype.

04:14:05 2 MR. FABRICANT: Let's show the witness Plaintiff's
04:14:09 3 50.

04:14:09 4 Q. (By Mr. Fabricant) Dr. Li, what is Plaintiff's Exhibit
04:14:12 5 50?

04:14:13 6 A. That's what they call VoiceFocus Conference Phone.

04:14:19 7 Q. And what were the features of this VoiceFocus
04:14:24 8 Conference Phone?

04:14:25 9 A. You can see on the top of the device, there's a
04:14:28 10 circular microphone array. Actually, it has eight
04:14:32 11 microphone components in a circle. And it has a similar
04:14:37 12 processor inside and also has -- has this particular
04:14:43 13 design, it also has loud speakers.

04:14:45 14 Q. And how does the technology, which is VoiceFocus
04:14:51 15 prototype, compare to the technology in your '049 patent?

04:14:56 16 A. This is a limitation, one of the limitations of '049
04:15:03 17 patent.

04:15:03 18 Q. What -- what features of the patent are found in the
04:15:07 19 VoiceFocus prototype?

04:15:08 20 A. Okay. As you can see, it has a microphone array. It's
04:15:12 21 a circular array. It can do sound source localization,
04:15:19 22 adaptive beamforming, and noise reduction.

04:15:22 23 Q. And are those features indicated on the -- on the -- on
04:15:27 24 the exhibit?

04:15:29 25 A. As you can see, under the title advanced DSP

04:15:38 1 algorithms, it lists adaptive beamforming, sound source
04:15:41 2 localization, adaptive echo cancellation, adaptive noise
04:15:47 3 reduction/speech enhancement.

04:15:51 4 Q. And what does the last sentence under those features
04:15:54 5 mean?

04:15:55 6 A. This means that -- called support to develop this
04:16:02 7 technology from New Jersey Committee Of Science and
04:16:12 8 Technology.

04:16:12 9 Q. Did there come a time when you took any efforts to
04:16:15 10 protect the technology which was represented in the
04:16:19 11 prototype?

04:16:19 12 A. Yes.

04:16:20 13 Q. And what -- what did you do?

04:16:21 14 A. We filed provisional patent application. Then later we
04:16:29 15 filed a patent -- official patent application.

04:16:33 16 Q. I show you Plaintiff's Exhibit No. 8.

04:16:36 17 Can you identify that, please?

04:16:39 18 A. Yes.

04:16:39 19 Q. What is this?

04:16:40 20 A. That's a certification of the filing of this
04:16:47 21 technology.

04:16:49 22 Q. And what was the date of the provisional application?

04:16:51 23 A. September 24th, 2010.

04:16:55 24 Q. And was any patent ultimately obtained based upon the
04:17:08 25 provisional application that you filed?

04:17:10 1 A. Yes.

04:17:10 2 Q. And what patent was that?

04:17:12 3 A. That's the '756 patent.

04:17:17 4 Q. I show you Plaintiff's Exhibit No. 2.

04:17:19 5 And what is Plaintiff's Exhibit No. 2, Dr. Li?

04:17:23 6 A. Yeah. This is the patent issued. We call that '756
04:17:33 7 patent.

04:17:33 8 Q. And this has the same filing -- provisional filing date
04:17:37 9 of September 10 -- September 24, 2010?

04:17:42 10 A. That's correct.

04:17:42 11 Q. What did you do after developing the prototype to try
04:17:50 12 to commercialize or take any steps to do business with the
04:17:56 13 prototype? What did you do?

04:17:57 14 A. We start to reach out, try to introduce this technology
04:18:06 15 to other companies.

04:18:09 16 Q. And do you recall any specific companies that you
04:18:13 17 reached out to?

04:18:13 18 A. Apple.

04:18:16 19 Q. Apple?

04:18:16 20 A. Yes.

04:18:17 21 Q. And how did you reach out to Apple?

04:18:19 22 A. I sent an email to a person I met at Apple.

04:18:28 23 Q. And do you recall the individual's name?

04:18:33 24 A. Jerome Bellegarda.

04:18:41 25 Q. And were there any further communications with Apple

04:18:46 1 after you -- you reached out?

04:18:47 2 A. Yes. He was interested in our technology, so he
04:18:49 3 forwarded to another person at Apple.

04:18:51 4 Q. And to whom did he forward the information, do you
04:18:55 5 know?

04:18:55 6 A. Alex Pance.

04:19:04 7 Q. Alex Pance, P-a-n-c-e?

04:19:08 8 A. That's right.

04:19:08 9 MR. FABRICANT: Please show the witness
04:19:13 10 Plaintiff's 101.

04:19:13 11 Q. (By Mr. Fabricant) And what files were sent to Alex
04:19:18 12 Pance; do you know?

04:19:18 13 A. The audio files related to our technologies.

04:19:22 14 Q. And did you ever meet with Alex Pance or anyone else at
04:19:30 15 Apple?

04:19:30 16 A. Yes, we met him when we visited Apple to do the
04:19:35 17 presentation and attach our technology.

04:19:41 18 Q. And where was the meeting with Apple?

04:19:43 19 A. At Apple's office in California.

04:19:46 20 Q. And did -- did you take anyone with you to the meeting?

04:19:50 21 A. Could you repeat your question?

04:19:51 22 Q. Did anyone go with you from your company?

04:19:54 23 A. Yes. Dr. Manli Zhu from my company visited Apple's
04:20:00 24 office with me.

04:20:01 25 Q. And could you describe what occurred at that meeting

04:20:05 1 with Apple?

04:20:05 2 A. We brought in our equipment, we set up the equipment
04:20:12 3 for about half-hour. Then we started the presentation of
04:20:19 4 our technology. We followed that -- we demoed the
04:20:21 5 technology in real-time demo so that they can understand
04:20:26 6 how our technology could work with Apple's application.

04:20:30 7 Q. And did you do any business with Apple as a result of
04:20:38 8 that meeting?

04:20:39 9 A. No.

04:20:39 10 Q. Did you ever have any further contact with Mr. Alex
04:20:44 11 Pance again?

04:20:48 12 A. At the meeting, we ask -- request -- we sent audio
04:20:54 13 files to him.

04:20:55 14 Q. Well, let's jump ahead a little bit.

04:20:58 15 Ever again, did you ever hear of this gentleman,
04:21:01 16 Alex Pance, after that Apple meeting?

04:21:03 17 A. Could you repeat?

04:21:05 18 Q. Sure. I wanted to know whether after that meeting with
04:21:09 19 Mr. Pance at Apple, if you ever had an opportunity to meet
04:21:13 20 that individual ever again?

04:21:14 21 A. Yes.

04:21:16 22 Q. And where was that?

04:21:19 23 A. At Amazon.

04:21:22 24 Q. And why did you meet Mr. Pance at Amazon?

04:21:28 25 A. He invited us to do a presentation and a demonstration

04:21:32 1 at Amazon's Lab 126.

04:21:33 2 Q. The same Aleksander Pance you met with at Apple was now
04:21:41 3 at Amazon?

04:21:42 4 A. Yes.

04:21:42 5 Q. And was Mr. Pance at the demonstration that we'll --
04:21:45 6 I'll ask you some questions about later, in 2011 --

04:21:49 7 A. Yes.

04:21:49 8 Q. -- at Amazon?

04:21:52 9 What else did you do at -- you know, to try to
04:21:57 10 bring your technology to the public? What else did you
04:22:00 11 attempt?

04:22:00 12 A. We submit our prototype of the VoiceFocus to CES.

04:22:14 13 Q. What is -- what is CES?

04:22:15 14 A. CES is the meaning of Consumer Electronics Show in Las
04:22:22 15 Vegas. It is a -- the largest consumer electronics show in
04:22:27 16 North America.

04:22:29 17 Q. And did you attend the show?

04:22:31 18 A. Yes.

04:22:31 19 Q. What year was that?

04:22:37 20 A. 2011.

04:22:38 21 Q. And were you an exhibitor at the show?

04:22:40 22 A. We were. Our company was exhibitor in the show.

04:22:45 23 Q. Did you have a booth there?

04:22:47 24 A. Yes, we had -- had a booth.

04:22:50 25 Q. And what happened at the show as a result of your

04:22:55 1 attendance, with the prototype?

04:22:59 2 A. We got an award. Our prototype got an CES design -- an
04:23:07 3 engineering award.

04:23:12 4 MR. FABRICANT: If you could bring up Exhibit 36,
04:23:15 5 please. Oops, sorry. Exhibit 12 -- Exhibit 46. I'm
04:23:20 6 sorry, Exhibit 46.

04:23:22 7 Q. (By Mr. Fabricant) What is exhibit -- Plaintiff's
04:23:24 8 Exhibit 46, Dr. Li?

04:23:25 9 A. It's also a photo we took at the CES show.

04:23:28 10 Q. And what is it photo of?

04:23:30 11 A. Yes. In the center of this photo, you can see our
04:23:35 12 prototype, if you will focus. Yes.

04:23:41 13 So in the entry of this -- there's a special entry
04:23:45 14 for the award of products and prototypes. Our product was
04:23:52 15 demonstrated, displayed there. So we took a photo to
04:24:02 16 memorialize this exciting moment.

04:24:05 17 MR. FABRICANT: Plaintiff's 258.

04:24:07 18 Q. (By Mr. Fabricant) What is Plaintiff's 258?

04:24:10 19 A. So that's -- again, that's a data sheet, says that we
04:24:13 20 got an award. We were allowed to put the award logo next
04:24:19 21 to our prototype.

04:24:21 22 Q. Continuing after the trade show, did you have any other
04:24:29 23 actions that you took to try to bring this to the public
04:24:33 24 attention?

04:24:34 25 A. Yes. After CES trade show, our prototype award, that

04:24:42 1 was announced by CES to the public. And to follow that, we
04:24:49 2 got an email from Amazon.

04:24:52 3 Q. Let me show you Plaintiff's Exhibit 36.

04:25:01 4 Is this the email to which you refer, Dr. Li?

04:25:04 5 A. Yes.

04:25:05 6 Q. And what was your understanding when you received this
04:25:07 7 email? What was the subject of this?

04:25:09 8 A. It says: Demo and face-to-face meeting request from
04:25:17 9 Amazon -- after we got the award.

04:25:24 10 Q. Did you know Jerry Wu?

04:25:26 11 A. No, I didn't.

04:25:26 12 Q. What was Mr. Wu asking you to demonstrate?

04:25:33 13 A. He specifically asked me -- asked us to demonstrate
04:25:42 14 adaptive beamforming, 3D audio, noise cancellation, and
04:25:47 15 echo cancellation.

04:25:49 16 Q. Now, he writes that he's asking you if you can set up a
04:25:53 17 time for a meeting. Did you -- did you do that? Did you
04:25:56 18 respond to him?

04:25:57 19 A. Yes. I made a response. We said: We will come.

04:26:02 20 Q. He also asks that he wanted to start NDA process. Did
04:26:06 21 you do that? Did you start that process?

04:26:08 22 A. Yes. He asked us to sign the NDA before we visit them.

04:26:19 23 Q. And did you sign an NDA?

04:26:20 24 A. Yes, I sign it.

04:26:24 25 Q. Plaintiff's Exhibit 40, can you identify that, Dr. Li?

04:26:26 1 A. That's the NDA which we signed.

04:26:33 2 Q. What was your understanding when you signed this NDA?

04:26:39 3 What -- what did it mean to you?

04:26:41 4 A. So it means that the information which we exchanged
04:26:46 5 with you recently in the meeting said we still own the
04:26:54 6 technology, and the information can only be used for
04:26:59 7 business relations. The information we told them -- or
04:27:02 8 they told us from the meeting cannot be used for product.

04:27:10 9 Q. Did you have any further written communications with
04:27:18 10 Amazon after signing the NDA before the meeting?

04:27:20 11 A. Yes.

04:27:23 12 MR. FABRICANT: Plaintiff's 144.

04:27:25 13 Q. (By Mr. Fabricant) Did you author Plaintiff's 144,
04:27:29 14 Doctor?

04:27:29 15 A. Yes. Based on their request, in response to Jerry Wu
04:27:40 16 that told him what we wanted to do, which technology we
04:27:47 17 were going to introduce.

04:27:48 18 Q. And were you suggesting the afternoon of October 17th?

04:27:52 19 A. Yes.

04:27:53 20 Q. What did you offer to show and demonstrate to Amazon,
04:27:57 21 in your email?

04:28:00 22 A. Microphone array with adaptive beamforming, noise
04:28:08 23 reduction, echo cancellation, 3D sound, and the new
04:28:13 24 microphone technologies.

04:28:14 25 Q. And then did you ask them if they wanted to see a

04:28:19 1 real-time demo?

04:28:19 2 A. Yes. I asked them if they want to see a real-time demo
04:28:25 3 because if they don't want real-time demo, we won't bring
04:28:31 4 digital equipment.

04:28:31 5 Q. And are you offering to show the technology that it
04:28:36 6 took you years to develop, is that what you're offering in
04:28:39 7 this email?

04:28:40 8 A. Based on their request, yes.

04:28:41 9 Q. And at the time of this email, which is September 28th,
04:28:44 10 2011, did you have any patent applications pending on this
04:28:49 11 technology?

04:28:49 12 A. Yes.

04:28:50 13 Q. What was pending?

04:28:53 14 A. The provisional for '756 patent.

04:28:59 15 Q. What about the full application on '756 patent?

04:29:03 16 A. Right.

04:29:05 17 Q. Two applications?

04:29:07 18 A. Full application has been filed.

04:29:09 19 Q. Besides Mr. Jerry Wu, who was the -- corresponding with
04:29:17 20 you from Amazon, did you have any written correspondence
04:29:20 21 with any other Amazon employees prior to the meeting?

04:29:24 22 A. I sent an email to Wei Li and told him that I'm coming
04:29:31 23 because Wei Li was my first employee. And he worked on
04:29:38 24 microphone technology, if you remember, CrispMic I.

04:29:44 25 Q. Where was Mr. Wei Li working when you sent him that

04:29:47 1 email?

04:29:48 2 A. The first time I was sending information to Wei Li, he
04:29:51 3 was at Cisco, and later he was hired by Amazon.

04:29:59 4 MR. FABRICANT: Plaintiff's 274.

04:30:01 5 Q. (By Mr. Fabricant) Are these your communications with
04:30:03 6 Wei Li while he was at Cisco?

04:30:05 7 A. Yes.

04:30:05 8 Q. And you had sent him your technical information?

04:30:09 9 A. Yes.

04:30:10 10 Q. And are you saying that in October of 2011, before your
04:30:16 11 Amazon meeting, he was now an employee at Amazon?

04:30:19 12 A. Right.

04:30:24 13 MR. FABRICANT: Plaintiff's 1449.

04:30:29 14 Q. (By Mr. Fabricant) And was he working at Lab 126 --
04:30:38 15 the Amazon Lab 126?

04:30:40 16 A. Yes.

04:30:42 17 Q. And what did you -- what did you want -- what did you
04:30:45 18 want Mr. Wei Li to -- what -- I'm sorry, strike that.

04:30:48 19 Did Mr. Wei Li communicate with you prior to the
04:30:51 20 meeting?

04:30:52 21 A. Yes.

04:30:52 22 Q. What did he tell you?

04:30:54 23 A. He told me -- as you can see from this email, he said:

04:30:59 24 I'm glad you are coming to showcase Li Creative

04:31:05 25 Technologies. I also recommended your technology to my

04:31:09 1 teams. They are quite interested. What's your schedule at
04:31:15 2 Lab 126?

04:31:15 3 Q. Did -- did Mr. Wei Li tell you what team he was working
04:31:22 4 on at Amazon?

04:31:23 5 A. No, he didn't.

04:31:24 6 Q. Did you ever come to learn what team he was actually
04:31:26 7 working on at the time of your correspondence?

04:31:29 8 A. No.

04:31:29 9 Q. Did you have any further communications with anyone at
04:31:42 10 Apple -- at Amazon prior to the October 17, 2011, meeting?

04:31:48 11 A. Following the -- the meeting, we made a schedule to
04:31:58 12 visit Lab 126.

04:31:59 13 MR. FABRICANT: Bring up Plaintiff's 276, please.

04:32:02 14 Q. (By Mr. Fabricant) Is that your email at the bottom of
04:32:07 15 the page from you to Wei Li?

04:32:09 16 A. Yes.

04:32:09 17 Q. Would you read that into the record, please, what you
04:32:12 18 wrote Mr. Wei Li?

04:32:14 19 A. Yeah, I told him welcome here in San Jose. Wei, I
04:32:29 20 brought a CrispMic for you.

04:32:33 21 Q. Why did you ask him whether his colleagues at Amazon
04:32:38 22 knew that he had once worked for Li Creative Technologies?

04:32:45 23 A. Asking him if your colleagues know that you work for Li
04:32:52 24 Creative Technologies because I don't know if the other
04:32:53 25 colleagues at Amazon knew that. I said I want to confirm.

04:32:57 1 Q. Did he respond to you?

04:32:59 2 A. Yes.

04:32:59 3 Q. What did he say?

04:33:00 4 A. He said they all know I work for LcT. LcT means Li
04:33:13 5 Creative Technologies.

04:33:13 6 Q. Dr. Li, did the meeting actually take place in Amazon?

04:33:17 7 A. Yes.

04:33:18 8 Q. Where did the meeting take place?

04:33:20 9 A. At Lab 126 in California.

04:33:25 10 Q. And what was the date of the meeting?

04:33:26 11 A. The date is October 2011.

04:33:34 12 MR. FABRICANT: Plaintiff's 1 -- Plaintiff's 45.

04:33:37 13 Q. (By Mr. Fabricant) What is Plaintiff's 45, Dr. Li?

04:33:44 14 A. That's the title page of my presentation and a demo.

04:33:51 15 Q. Did you prepare this presentation yourself?

04:33:53 16 A. Yes.

04:33:54 17 Q. Did you write the information, proprietary information
04:34:00 18 included? Did you write that?

04:34:04 19 A. Yes.

04:34:06 20 MR. FABRICANT: And if we could go to the next
04:34:08 21 page of the exhibit.

04:34:08 22 Q. (By Mr. Fabricant) Did you prepare this outline as to
04:34:12 23 what you intended to demonstrate to Amazon?

04:34:15 24 A. Yes, I did.

04:34:16 25 Q. Did you, in fact, demonstrate all of these subjects to

04:34:18 1 Amazon on that date?

04:34:19 2 A. Yes.

04:34:28 3 MR. FABRICANT: And next page, please.

04:34:29 4 Q. (By Mr. Fabricant) There's an item here, patents: 13
04:34:34 5 filed; two issued. Was that actually in the presentation
04:34:34 6 that you delivered that day on October 17, 2011, at Amazon;
04:34:38 7 is that true?

04:34:38 8 A. That's true. At that time we had two issued patent and
04:34:44 9 13 filed patent.

04:34:47 10 MR. FABRICANT: Next page, please.

04:34:51 11 Q. (By Mr. Fabricant) And is this the award, the one at
04:34:52 12 the far right column, that you previously testified to from
04:34:55 13 the CES show?

04:34:58 14 A. That's right.

04:35:00 15 MR. FABRICANT: And if you would go to the next
04:35:02 16 page.

04:35:02 17 Q. (By Mr. Fabricant) What are these core technologies
04:35:06 18 that you were presenting?

04:35:08 19 A. I present -- I listed here on the top, you can see
04:35:14 20 microphone array, including linear and circular array;
04:35:21 21 noise reduction; echo cancellation; sound source
04:35:27 22 localization; and also 3D sound systems.

04:35:33 23 Q. Did you present all of those technologies to Amazon on
04:35:36 24 that date?

04:35:37 25 A. Yes, I did.

04:35:39 1 MR. FABRICANT: And if you would go two pages.

04:35:48 2 One more.

04:35:48 3 Q. (By Mr. Fabricant) And what does this page of the
04:35:50 4 presentation depict, Dr. Li?

04:35:52 5 A. So it's called echo cancellation. And on bottom, you
04:35:56 6 see a table. There's some buttons. They press the
04:36:02 7 buttons. People can hear the audio, and compare the
04:36:06 8 difference by using microphone array system.

04:36:09 9 MR. FABRICANT: And on the next page.

04:36:11 10 Q. (By Mr. Fabricant) What does this page of the
04:36:16 11 presentation depict?

04:36:17 12 A. This page depicts sound source localization and
04:36:23 13 circular array. You can find out the location of a speaker
04:36:27 14 in the room.

04:36:28 15 Q. Where did you get the figure that's been highlighted
04:36:31 16 over on the left; do you remember?

04:36:33 17 A. Yeah. So this figure shows a picture of microphone
04:36:42 18 components. There are eight microphone component in a
04:36:46 19 circle. So we call this circular microphone array.

04:37:04 20 MR. FABRICANT: And if you would go to the page
04:37:07 21 entitled Speech and Speaker Recognition. Slide down
04:37:16 22 please. Keep going. Right there. One back. There you
04:37:18 23 go.

04:37:19 24 Q. (By Mr. Fabricant) What does this page detect,
04:37:21 25 Dr. Li -- depict?

04:37:22 1 A. The title is Speech and Speaker Recognition. That is
04:37:26 2 the use of microphone array to do speech recognition, okay.

04:37:30 3 And on the photo -- on the picture, you can see we
04:37:37 4 demoed this to Amazon people. There is a circular array
04:37:42 5 with four microphone components on top, one, two, three,
04:37:47 6 four. And when people talk from four different directions,
04:37:53 7 yes, the line in the center will point to that speaker to
04:37:58 8 indicate that the system can find out the sound source.

04:38:03 9 Q. Dr. Li, you were here, as you said, for the opening of
04:38:07 10 Amazon's counsel. He showed some video, and he said
04:38:11 11 everything happens in Seattle, Washington, and there's some
04:38:14 12 brain there called Alexa.

04:38:16 13 What does that have to do with a microphone array
04:38:18 14 that detects speech, can you -- can you tell the jury?

04:38:21 15 A. In our terminology, this is called front end. Whatever
04:38:27 16 they showed in the picture, the five-second video, go
04:38:31 17 through Internet, go to their -- their computer server,
04:38:40 18 that we call back end. The patent -- the invention is
04:38:46 19 about front end, about a microphone. That's our invention.

04:38:50 20 Q. And when you showed us your developer module product,
04:38:55 21 is that front end?

04:38:56 22 A. That's front end.

04:38:58 23 Q. And can that be used in anybody's product for front
04:39:02 24 end?

04:39:02 25 A. Yes.

04:39:02 1 Q. Does it matter what's happening at the back end with
04:39:05 2 respect to your invention?

04:39:07 3 A. Any kind of back end with our microphone can support.

04:39:16 4 MR. FABRICANT: If you'd go to the next to the
04:39:17 5 last page of this exhibit. Right -- one more back. One
04:39:26 6 more forward, I'm sorry. Keep going. Yes, one more, back.
04:39:35 7 Yeah, stop.

04:39:36 8 Q. (By Mr. Fabricant) What was depicted on this page that
04:39:39 9 you presented to Amazon?

04:39:42 10 A. I want to present some applications for our technology.
04:39:48 11 And as you can see, the audio search, voice search, music
04:39:57 12 search, why I present that, I presented technologies to
04:40:02 13 Amazon in the beginning, right?

04:40:07 14 We think it's better to present some design idea,
04:40:13 15 product idea so it will be less of a technology from us.
04:40:16 16 And also because we signed an NDA, they said, we'll see.
04:40:20 17 We give them product idea and that they may be even more
04:40:25 18 happy for us to work with them and license our technology.

04:40:27 19 At that time, the statement in the opening, at
04:40:32 20 that time, Amazon was a bookstore, right? They sell books
04:40:41 21 online. Also, they have a lot of music. They sell music.
04:40:47 22 Thought, okay, that's good idea, right? They can use our
04:40:50 23 technology to retrieve music for at least two reasons.
04:40:57 24 They have a good collection of music.

04:40:59 25 Second, at that time, speech recognition --

04:41:02 1 recognition technology was not mature, mature. It cannot
04:41:05 2 do anything. But it's good to use voice to retrieve music
04:41:12 3 because the music title -- are fixed. It's easy to be --
04:41:16 4 search to find out -- to be recognized by a speech
04:41:22 5 technology at that time.

04:41:24 6 My suggestion, based on my 20 years of research
04:41:28 7 and experience, I think I present a very good idea to
04:41:32 8 Amazon, not just Amazon but also -- but also benefitted the
04:41:38 9 potential customers in the future by utilizing this
04:41:43 10 technology to fulfill their life.

04:41:48 11 Q. Dr. Li, I'd like to show you Plaintiff's Exhibit 44.
04:41:55 12 Why did you write and what did you send to Amazon on -- on
04:42:01 13 October 24 after the meeting?

04:42:05 14 A. I have two reasons. First, during the meeting, Amazon
04:42:09 15 people asked me to send these slides to them. I promised
04:42:15 16 them when I get back to my office, I will send them an
04:42:18 17 email, number one.

04:42:19 18 Number two, when I had communication with Jerry Wu
04:42:25 19 by email, I asked him, you know, we want the business
04:42:29 20 discussions, not just technical discussions, in the
04:42:33 21 beginning. And he promised we talk about technical first.
04:42:38 22 Then followed by business discussion.

04:42:41 23 Okay. Based on the promise, we send back an
04:42:45 24 email. We answer them. Okay. Li Creative Technologies,
04:42:48 25 you people infringe our technology. Now we start to talk

04:42:52 1 about business.

04:42:54 2 THE COURT: Dr. Li, if I could ask if you would
04:42:56 3 slow down a little bit in your speech, especially given
04:42:59 4 your accent, I would think the jury can follow you better
04:43:03 5 if you would speak more slowly.

04:43:05 6 THE WITNESS: Okay. Your Honor.

04:43:06 7 THE COURT: Will you try to do that for me?

04:43:11 8 THE WITNESS: Thank you, Your Honor.

04:43:11 9 THE COURT: Okay. Let's proceed, Mr. Fabricant.

04:43:14 10 Q. (By Mr. Fabricant) Dr. Li, did you ever ultimately do
04:43:16 11 any business with Amazon?

04:43:18 12 A. No.

04:43:18 13 Q. We saw during Amazon counsel's opening, reference to an
04:43:27 14 interview that you had with Amazon for a job?

04:43:30 15 A. Yes.

04:43:31 16 Q. Do you remember that?

04:43:31 17 A. Yes.

04:43:32 18 Q. Okay. Did you, in fact, interview with Amazon?

04:43:35 19 A. Yes.

04:43:36 20 Q. When was that?

04:43:37 21 A. 2013.

04:43:39 22 Q. At the time of the interview, had Amazon launched any
04:43:44 23 product at all that you believed was infringing your
04:43:47 24 patent?

04:43:47 25 A. No.

04:43:49 1 Q. And what was the purpose why you met with Amazon in
04:43:55 2 2013 or had an interview?

04:43:57 3 A. We had been contacted by Amazon human resource. They
04:44:02 4 are interested in my expertise -- actually, I had been
04:44:10 5 contacted almost every year. And they want to set up time
04:44:15 6 for interview, and also they posted a job, they were hiring
04:44:23 7 speech people, and I also respond to their job -- I want to
04:44:27 8 talk to them.

04:44:28 9 Q. Did you have the interview?

04:44:29 10 A. I had telephone interview with them.

04:44:36 11 Q. And did you get any job offer from Amazon?

04:44:38 12 A. No, I didn't.

04:44:39 13 Q. Did you have any further contact with Amazon after that
04:44:47 14 period when the interview was?

04:44:50 15 A. Later in 2014, we were invited to attend an event
04:45:00 16 organized by Amazon.

04:45:03 17 Q. And what type of event?

04:45:04 18 A. That's when Amazon officially announced the Echo
04:45:12 19 product to public.

04:45:14 20 Q. And did you attend the event?

04:45:17 21 A. I attended that event.

04:45:18 22 Q. Where did the event take place?

04:45:20 23 A. In New York City.

04:45:22 24 Q. Did -- did you take anyone from your company to the
04:45:27 25 event?

04:45:30 1 A. Dr. Manli Zhu. She attended the event with me.

04:45:35 2 Q. And can you describe what happened at the event?

04:45:38 3 A. Yes. At the event was a large room, the size similar
04:45:44 4 to this room. We arrived a little earlier, so we stand in
04:45:49 5 the front.

04:45:49 6 And they put Echo device, the new product, at the
04:45:56 7 top of the table in the front. So since we arrived
04:46:02 8 earlier, we were very close to the device.

04:46:08 9 And then they started to demo the technology, the
04:46:11 10 product. And they have people talk from different location
04:46:17 11 to the device and talk from different distance to retrieve
04:46:28 12 music.

04:46:29 13 And from the device, we could see on top of the
04:46:34 14 angle, there's a circle of rings, that also show from their
04:46:38 15 opening. And when people talk from that direction, the
04:46:43 16 ring -- the light point up -- point to that direction.

04:46:46 17 So that's like an indicator to -- we call sound
04:46:54 18 source localization. They are using the technology to find
04:46:57 19 the location of sound source.

04:46:58 20 And also on the top of the device, there are a
04:47:04 21 ring of holes. So we know -- from there, we knew that was
04:47:12 22 a circular microphone array.

04:47:13 23 And, also, they talk from a distance array.
04:47:17 24 That's what we call far-field. When -- they must use
04:47:23 25 adaptive beamforming technology and a noise reduction

04:47:27 1 technology to support speech recognition in far-field.

04:47:32 2 So from the demo, I was surprised. That's exactly
04:47:43 3 the same thing I told them in the meeting on the demo when
04:47:46 4 we visit them. Everything is there, circular microphone
04:47:51 5 array, adaptive beamforming, noise reduction and --
04:48:06 6 beamforming, noise reduction, and all -- everything
04:48:08 7 that's -- that's in there, right?

04:48:12 8 So I was very upset. And, you know, I was not
04:48:23 9 happy. It's too bad we told you this technology, told
04:48:28 10 Amazon the technology, that you didn't license the
04:48:31 11 technology from us. You know we had the patent. You know,
04:48:35 12 we signed an NDA. And so I said they were using the things
04:48:42 13 in our patent, the technology in our patent.

04:48:44 14 Q. Did you say anything to your -- your colleague you were
04:48:46 15 with, Dr. Zhu?

04:48:47 16 A. Yes. So Dr. Manli Zhu was there with me. I talk to --
04:48:56 17 I told her, that's exactly in our patent. That's what we
04:49:00 18 told Amazon when I was with Amazon. And she agreed with
04:49:06 19 me.

04:49:07 20 Q. Did you talk to any -- other than to see the
04:49:09 21 demonstration and look at the device, did you talk to any
04:49:12 22 of the Amazon engineers that were there?

04:49:14 23 A. Since I was standing in front very close to the demo
04:49:23 24 engineer, so I tried to confirm with the engineer and ask
04:49:27 25 them, you know, are you using sound source localization,

04:49:31 1 since we saw the -- the wide circle of the light? And he
04:49:35 2 said, yes.

04:49:37 3 And -- and then we asked -- asked him, you know,
04:49:43 4 is that circular microphone array? Yes. And are you using
04:49:48 5 adaptive beamforming and noise reduction to support the
04:49:55 6 far-field? Yeah. He said: Yes. They were very proud
04:50:00 7 about the product, about the features.

04:50:02 8 Q. Dr. Li, on the -- on the date of that meeting, which
04:50:06 9 was November 20, 2014, what was the status of your patent
04:50:11 10 application?

04:50:12 11 A. We have -- the patent was just issued one month before
04:50:18 12 I visited the event.

04:50:21 13 Q. Did you tell anyone at the event that you were upset?

04:50:26 14 A. I told Manli Zhu. And also following the event, I
04:50:37 15 wrote a letter to Rohit Prasad. He is the leader of the
04:50:48 16 Echo group.

04:50:48 17 Q. Let me show you Plaintiff's 131.

04:50:51 18 Is this the letter that you wrote following the
04:50:55 19 event?

04:50:58 20 A. Yes.

04:50:59 21 Q. And who is the person at the top of the email string,
04:51:04 22 Lexie Burnham?

04:51:05 23 A. Yes. She was one of the organizer of the event. Since
04:51:13 24 I don't have a -- Rohit Prasad email address, I sent email
04:51:24 25 to Lexie Burnham since I received the email from her. And

04:51:29 1 I asked her to forward my letter -- the email to Rohit
04:51:40 2 Prasad.

04:51:40 3 MR. FABRICANT: And if you scroll down to the
04:51:42 4 letter.

04:51:42 5 Q. (By Mr. Fabricant) Is this the letter that you wrote
04:51:43 6 to --

04:51:44 7 A. Yes.

04:51:45 8 Q. Rohit -- it goes on two pages. What -- what was
04:51:51 9 your -- what you were trying to say Rohit Prasad in this
04:51:53 10 letter?

04:51:53 11 A. As you can see, it's a very polite letter about the
04:51:57 12 information in the past -- okay. Thank you.

04:52:08 13 And I told them that we attended their meeting in
04:52:12 14 November 20, 2014. We saw their demo. Not only myself but
04:52:21 15 also my colleague, Dr. Manli Zhu. We observed that Echo
04:52:27 16 has a circular microphone array for sound source
04:52:30 17 localization and capturing far-field sound, and uses voice
04:52:35 18 to search music.

04:52:40 19 I told them we are R&D company that works on
04:52:44 20 acoustics, speech products, and microphone array research.
04:52:51 21 We have -- have a family of technology with circular --
04:53:01 22 circular microphone array, adaptive beamforming, noise
04:53:09 23 reduction, acous -- echo cancel -- cancellation, far-field
04:53:10 24 microphone, automatic speech recognition, natural language
04:53:14 25 processing, 3D audio.

04:53:17 1 Q. Had Mr. Prasad been at the meeting in October of '11?

04:53:25 2 A. Yes, he was in the meeting.

04:53:29 3 Q. Mr. Prasad -- Rohit Prasad, October of '11, was he at
04:53:30 4 the meeting?

04:53:31 5 A. Oh, October 11 meeting?

04:53:31 6 Q. Yes.

04:53:33 7 A. No.

04:53:34 8 Q. Was he at the launch party?

04:53:36 9 A. He was at the launch party.

04:53:37 10 Q. So why were you telling him about the October 17th,
04:53:43 11 2011, meeting?

04:53:43 12 A. I told him that we visited the Lab 126 in 2011, and we
04:53:49 13 demoed circular array and echo cancellation technology,
04:53:55 14 including both hardware and software at that time.

04:53:58 15 Q. What are you telling him in the next paragraph? "Our
04:54:03 16 company"...

04:54:03 17 A. I told him our company holds several U.S. patents on
04:54:10 18 circular array systems and related technologies.

04:54:16 19 Q. And what did you mean by: We believe our patents and
04:54:21 20 technologies will be very useful to Amazon's business?
04:54:24 21 What did you mean by that?

04:54:25 22 A. Because they already use our technology in the product.

04:54:33 23 Q. What did you mean by: To extend your patent portfolio
04:54:36 24 and to protect your products?

04:54:37 25 A. Meaning of that, just very polite language. Meaning of

04:54:42 1 that is that they infringe our patent.

04:54:47 2 Q. When you wrote, it is our belief that collaborations
04:54:50 3 are the best solutions to this matter, what did you mean by
04:54:53 4 that?

04:54:53 5 A. Means we want a piece of this.

04:54:55 6 Q. And then you asked him for a person -- an in-person
04:55:01 7 meeting -- to schedule an in-person meeting; is that true?

04:55:04 8 A. Yes, that meeting was, you infringe our patent, let's
04:55:08 9 talk about that.

04:55:08 10 Q. Did you ever receive any response whatsoever from
04:55:13 11 Mr. Prasad?

04:55:14 12 A. No, I didn't.

04:55:14 13 Q. Did you ever receive any response whatsoever from
04:55:17 14 anyone at Amazon ever again?

04:55:18 15 A. No.

04:55:28 16 Q. Now, in -- did you ever offer your -- any rights --
04:55:34 17 intellectual property rights to your '756 patent to anyone?

04:55:37 18 A. Yes, I did.

04:55:39 19 Q. Oh, what did you do?

04:55:40 20 A. We submitted a proposal online to Google.

04:55:47 21 Q. And what -- what was the proposal?

04:55:51 22 A. We wanted to give the right to Google to use the '756
04:55:57 23 patent.

04:55:57 24 Q. And did you propose a number?

04:56:02 25 A. Yeah, I propose the '756 patent number, and also we

04:56:06 1 offered a price of 700,000.

04:56:09 2 Q. And what rights did you believe you were retaining?

04:56:12 3 A. We believe we still have the right to use patent, hold
04:56:17 4 patent, but just gave Google the right to -- to use our
04:56:22 5 patent.

04:56:23 6 And also we believe we still have the chance to
04:56:25 7 review whatever -- if Google accept our patent, we still
04:56:30 8 have a chance to review the -- this deal with our patent
04:56:38 9 attorney and with our content.

04:56:46 10 Q. Do you have any written agreement with Google as to
04:56:48 11 what the terms of any such proposal would be?

04:56:51 12 A. Could you repeat your question?

04:56:53 13 Q. Sure. Is there any written agreement between you and
04:56:57 14 Google at all as to what the terms of such an offer would
04:56:59 15 be?

04:56:59 16 A. No.

04:57:00 17 Q. Did Google accept any proposal?

04:57:03 18 A. No.

04:57:03 19 Q. Did you ever do any business with Google with respect
04:57:05 20 to that?

04:57:06 21 A. No.

04:57:06 22 Q. Did you ever offer to sell or license the '049 patent,
04:57:12 23 the patent that's in this lawsuit?

04:57:14 24 A. Could you repeat your question, please?

04:57:17 25 Q. Did you ever offer to Google or anyone else to license

04:57:20 1 or sell the '049 patent, the patent in this lawsuit?

04:57:24 2 A. No.

04:57:24 3 Q. Was the Google proposal only with respect to the '756?

04:57:28 4 A. They reject '756 patent.

04:57:36 5 Q. Did you have any negotiations with Google about the --

04:57:39 6 the price for the '756 intellectual property rights?

04:57:43 7 A. No.

04:57:46 8 Q. Did Google tell you anything about what they would

04:57:49 9 intend to do with the '756 if you gave them any rights?

04:57:54 10 A. No.

04:58:01 11 Q. Did there come a time, Dr. Li, when you filed an

04:58:14 12 additional application for an additional patent after the

04:58:20 13 '049 patent was issued?

04:58:23 14 A. Yes.

04:58:24 15 Q. And what additional patent application did you file?

04:58:30 16 A. We filed a reissue patent -- patent application.

04:58:35 17 Q. And what reissue application were you trying to --

04:58:42 18 strike that.

04:58:42 19 What patent were you trying to get a reissue on?

04:58:46 20 A. We tried to file a reissue patent for Patent '756.

04:58:56 21 Q. Did you ever try to file a reissue on the '049 patent?

04:59:02 22 A. No.

04:59:02 23 Q. And what was your understanding as the applicant, the

04:59:06 24 inventor -- what were you trying to accomplish with this

04:59:10 25 new reissue of the '756?

04:59:13 1 A. We thought we were entitled to make our claim broader.

04:59:20 2 Q. And what do you mean by broader?

04:59:23 3 A. That means we can cover more than what we have
04:59:34 4 received.

04:59:36 5 MR. FABRICANT: Can you bring up, please,
04:59:38 6 Plaintiff's Exhibit 1468?

04:59:40 7 Q. (By Mr. Fabricant) Is this the application for the
04:59:49 8 second reissue of the '756 patent, Doctor?

04:59:53 9 A. Yes.

04:59:54 10 MR. FABRICANT: If you'd scroll down to the
04:59:57 11 bottom, all the way down. We're looking for Page 1 of 2.
05:00:21 12 That's not the page. We need --

05:00:39 13 Your Honor, is it all right if I use the ELMO for
05:00:42 14 this, rather than hold up the jury?

05:00:44 15 THE COURT: Yes, it is.

05:01:09 16 Q. (By Mr. Fabricant) So, Dr. Li, down at the very bottom
05:01:12 17 of this page, there's a reference to the U.S. 8,861,756.
05:01:18 18 Was that your '756 patent?

05:01:19 19 A. Yes.

05:01:19 20 Q. And it says: That patent is broadened as explained in
05:01:26 21 the attached sheet. Is that what you intended?

05:01:28 22 A. Yes.

05:01:29 23 Q. There -- there are boxes above that paragraph. And the
05:01:34 24 second box, which is not checked, says: By reason of the
05:01:38 25 patentee claiming more or less than he had the right to

05:01:40 1 claim.

05:01:42 2 Do you know why that box has been checked?

05:01:46 3 A. I'm sorry, I'm not an attorney. I don't know why this
05:01:52 4 box was not checked, but the proposal of this reissue
05:02:00 5 application is to make the claim broader.

05:02:05 6 Q. And it refers to an attached sheet at the very bottom
05:02:14 7 of this exhibit. Do you see the reference? I'm going to
05:02:19 8 show you the attached sheet that's referred to.

05:02:30 9 The last few words of the paragraph, the big
05:02:34 10 paragraph, says: It is a broadening reissue.

05:02:38 11 Is that what you intended when you prepared the
05:02:41 12 attached sheet and submitted it to the Patent Office?

05:02:43 13 A. Yes.

05:02:43 14 Q. Did you intend anything else?

05:02:45 15 A. That's it.

05:02:46 16 Q. Did you intend to -- to intimate that this patent was
05:02:50 17 invalid?

05:02:52 18 A. Could you repeat your question?

05:02:54 19 Q. Did you intend to suggest that the patent was invalid?

05:02:58 20 A. No.

05:02:58 21 Q. Were you referring to the '049 patent at all?

05:03:01 22 A. No.

05:03:10 23 MR. FABRICANT: Your Honor, I pass the witness.

05:03:12 24 THE COURT: Cross-examination?

05:03:18 25 MR. RE: Yes, Your Honor. Thank you.

05:03:29 1 MR. LAQUER: May I approach?

05:03:33 2 THE COURT: You may approach with binders.

05:04:08 3 MR. LAQUER: Your Honor, may I approach one more
05:04:10 4 time to retrieve a physical?

05:04:12 5 THE COURT: To retrieve what?

05:04:15 6 MR. LAQUER: The physical exhibit that is --

05:04:19 7 THE COURT: Oh, yes, you may approach the witness.
05:04:26 8 The Court Security Officer will hand it to you.

05:04:28 9 All right. Mr. Re, you may proceed with
05:04:31 10 cross-examination.

05:04:32 11 MR. RE: Thank you, Your Honor.

05:04:33 12 And thank you.

05:04:33 13 CROSS-EXAMINATION

05:04:35 14 BY MR. RE:

05:04:35 15 Q. Good afternoon, Dr. Li.

05:04:37 16 A. Hi, Mr. Re.

05:04:39 17 Q. How are you? It's nice to see you in person.

05:04:42 18 A. Yes.

05:04:42 19 Q. It's better than Zoom, right?

05:04:45 20 A. Right.

05:04:46 21 Q. I understand that you met with Amazon, you said, in
05:04:49 22 October of 2011; is that right?

05:04:51 23 A. That's right.

05:04:53 24 Q. And the features that you discussed with them at the
05:04:58 25 meeting, if I understand, was the circular microphone

05:05:04 1 array; is that right?

05:05:04 2 A. Microphone array, including circular array.

05:05:07 3 Q. Yes. And also about -- you also went there to discuss
05:05:12 4 noise reduction, right?

05:05:12 5 A. Yes.

05:05:15 6 Q. And echo cancellation; is that right?

05:05:17 7 A. Yes.

05:05:18 8 Q. And sound source localization, right?

05:05:22 9 A. Right.

05:05:24 10 Q. Right.

05:05:26 11 MR. RE: And if we can call up Exhibit 45.

05:05:29 12 Q. (By Mr. Re) I believe those are listed in your
05:05:32 13 presentation. Is this the presentation you discussed with
05:05:34 14 counsel?

05:05:34 15 A. Yes.

05:05:35 16 Q. And these are the slides that you presented or sent to
05:05:44 17 Amazon on or about October 17th, 2011?

05:05:47 18 A. Yes.

05:05:48 19 Q. And let's take a look, particularly at the page that
05:05:51 20 actually discusses the subject matter relevant to your '049
05:05:55 21 patent.

05:05:55 22 MR. RE: If we can go to Page 5, please.

05:05:58 23 Q. (By Mr. Re) And these where you list your core
05:06:04 24 technologies?

05:06:04 25 A. Yes.

05:06:05 1 Q. And is it your testimony you presented these
05:06:08 2 technologies to Amazon in October of 2011?

05:06:13 3 A. Right.

05:06:17 4 Q. Let's go through those one at a time, and I have those
05:06:20 5 blown up because I want to take some notes.

05:06:23 6 You recognize this coming from the top of Page 5
05:06:30 7 on your screen?

05:06:34 8 A. Could you repeat your question?

05:06:36 9 Q. You see how this is just a picture of the top of Page 5
05:06:39 10 from the exhibit you sent to Amazon after your meeting on
05:06:42 11 October 2011. Do you see that?

05:06:44 12 A. Yes.

05:06:44 13 Q. And I want to break this down a little bit to see if we
05:06:49 14 can see a little more about these ideas.

05:06:51 15 Now, the first item on the list is microphone
05:06:55 16 array, linear, circular; do you see that?

05:06:57 17 A. Yes.

05:06:57 18 Q. And you did not invent the linear or circular
05:07:02 19 microphone array, correct?

05:07:07 20 A. Right.

05:07:07 21 Q. And you know that those are very well-known by the time
05:07:15 22 you came to Amazon in 2011, right?

05:07:17 23 A. Linear array was very well-known. Circular array,
05:07:25 24 there was no product.

05:07:26 25 Q. Let me show you what's been previously marked as

05:07:30 1 exhibit -- Defendants' Exhibit 51.

05:07:40 2 Are you familiar with exhibit -- Defendant's
05:07:43 3 Exhibit 51, this article by Jacek Dmochowski?

05:07:48 4 A. Uh-huh.

05:07:50 5 Q. You are? You've seen this before?

05:07:53 6 THE COURT: You'll have to answer out loud,
05:07:56 7 Dr. Li. Non-verbalized answers won't work. So say yes or
05:08:01 8 no. Don't say uh-huh.

05:08:03 9 A. Yes.

05:08:04 10 Q. (By Mr. Re) And you see that this article was first
05:08:08 11 published in May of 2007. Do you see that?

05:08:11 12 A. Yes.

05:08:11 13 Q. And I'd like to show you Page 2 of this exhibit, and at
05:08:20 14 the bottom, beginning with circular arrays, do you see
05:08:22 15 that?

05:08:23 16 A. Yeah.

05:08:23 17 Q. And do you see where it states that circular arrays
05:08:29 18 offer some advantages over their linear counterparts? Do
05:08:37 19 you see that?

05:08:37 20 A. Yes.

05:08:38 21 Q. And one of the advantages shown in this 2007 published
05:08:43 22 article is that a circular array provides spatial
05:08:49 23 discrimination over the entire 360 degree azimuth range.
05:08:55 24 Do you see that?

05:08:56 25 A. Yes.

05:08:56 1 Q. And you understand 360 degree azimuth simply means
05:08:59 2 being able to go in all directions in the room, for
05:09:07 3 example, right?

05:09:07 4 A. Yes.

05:09:07 5 Q. And it continues that this is particularly important
05:09:10 6 for applications that require front-to-back signal
05:09:15 7 enhancement, such as teleconferencing. Do you see that?

05:09:19 8 A. Yes.

05:09:20 9 Q. And in this article, it continues that another
05:09:25 10 advantage of a circular microphone array is that the
05:09:31 11 geometry, and I quote, circular array geometry allows for
05:09:38 12 more compact designs. Do you see that?

05:09:40 13 A. Yes.

05:09:40 14 Q. And if we go further down the page, there's a picture
05:09:46 15 on Page 2, and I'd like to blow that up for you.

05:09:51 16 And you do see in that picture, sir, that there
05:09:59 17 are six microphones or sound sensors depicted in Figure 1
05:10:04 18 of this article?

05:10:06 19 A. Right.

05:10:07 20 Q. And this is looking down at a circular microphone array
05:10:12 21 from the top, right?

05:10:13 22 A. Yes.

05:10:14 23 Q. So you were clearly not the first inventor of a
05:10:22 24 circular microphone array, correct?

05:10:24 25 A. Yes.

05:10:26 1 Q. So let's just -- let me write on the board here that
05:10:31 2 the microphone arrays, linear or circular, are known, okay?
05:10:42 3 A. Right.
05:10:43 4 Q. And when I say known, I mean publicly known because
05:10:56 5 they're in articles that are available to the public,
05:10:59 6 right?
05:10:59 7 A. Individual technological component.
05:11:06 8 Q. Yes. And this component was shown in the article I
05:11:09 9 just showed to you from Dmochowski, right?
05:11:11 10 A. Yes.
05:11:13 11 Q. Okay. Now, the next item I see on the -- on the board,
05:11:19 12 that is noise reduction. Do you see that? Do you see
05:11:28 13 noise reduction, do you see that --
05:11:32 14 MR. RE: If we can call that up.
05:11:33 15 A. There's nothing displayed on monitor.
05:11:37 16 Q. (By Mr. Re) Can you see this --
05:11:38 17 A. Oh, yes, on the board, yes.
05:11:40 18 Q. You can see this, right?
05:11:42 19 A. Yes.
05:11:42 20 Q. Okay. If you can't see, let me know. And if you can't
05:11:45 21 hear me, let me know, okay?
05:11:48 22 Okay. Now, you did not invent noise reduction,
05:11:54 23 correct?
05:11:54 24 A. Right.
05:11:55 25 Q. And, in fact, that's been around a long time, right?

05:11:59 1 A. Yeah.

05:12:01 2 Q. And, in fact, you're familiar with this 2001 book by

05:12:10 3 Dr. Michael Brandstein, correct?

05:12:15 4 A. Yes.

05:12:15 5 Q. And this book is entitled Microphone Arrays, and I'm

05:12:22 6 holding up Defendants' Exhibit 71P?

05:12:26 7 A. Yes.

05:12:27 8 Q. And you knew about this book, right?

05:12:30 9 A. I think one of the article from the book.

05:12:34 10 Q. Yes. But you knew about the book itself, didn't you?

05:12:37 11 A. Yes.

05:12:40 12 Q. Yes.

05:12:41 13 And at the bottom of the page of this book --

05:12:45 14 let's go -- open the book up, and if we can go in so

05:12:49 15 everyone can see, you see there's a copyright date in this

05:12:54 16 book? If you'd like -- if you have any doubt about it, let

05:12:59 17 me know if you want to see it, but is it clear to you that

05:13:02 18 this book was published back in 2001.

05:13:06 19 A. Yes.

05:13:06 20 Q. And this book was published about 10 years before you

05:13:10 21 met with Amazon, right?

05:13:12 22 A. Yes.

05:13:15 23 Q. And you know that noise reduction is specifically

05:13:19 24 discussed in this book on microphone arrays, right?

05:13:29 25 A. I don't remember I read that part of the book, but I

05:13:34 1 think it must discuss noise reduction when it talk about
05:13:39 2 microphone array.

05:13:39 3 Q. Well, let's take a closer look.

05:13:42 4 MR. RE: If we can go to Page 11 of the table of
05:13:46 5 contents of this book.

05:13:48 6 Q. (By Mr. Re) Page 11 has a table of contents. We can
05:13:53 7 see sections that are in this book specifically on noise
05:13:58 8 reduction with microphone arrays. Do you see that?

05:14:00 9 A. Yes.

05:14:02 10 MR. RE: And let's go to Page 13 of this
05:14:05 11 Exhibit 49.

05:14:07 12 Q. (By Mr. Re) And we can see in the table of contents in
05:14:10 13 Chapter 12 several more sections dealing with noise
05:14:14 14 reduction techniques. Do you see that?

05:14:15 15 A. Yes.

05:14:16 16 Q. And we can see that Dr. Brandstein's Chapter 12 is all
05:14:25 17 about microphone arrays with -- and I quote, postfilters
05:14:31 18 for noise and acoustic echo reduction. Do you see that?

05:14:36 19 A. Yes.

05:14:36 20 Q. And do you also see in Section 12.3, a reference to a
05:14:41 21 Wiener Filter. Do you see that?

05:14:45 22 A. Yes.

05:14:45 23 Q. And that's a noise reduction algorithm, isn't it?

05:14:48 24 A. Yes.

05:14:49 25 Q. And that is the same exact noise reduction algorithm

05:14:54 1 that you describe using in your '049 patent, correct?

05:14:59 2 Wiener Filter?

05:15:01 3 A. Can be one of the noise reduction algorithm.

05:15:06 4 Q. Yes, and it's one of many different noise reduction
05:15:09 5 algorithms, isn't it?

05:15:11 6 A. Yes.

05:15:11 7 Q. And we can also see in the Brandstein table of contents
05:15:16 8 that Dr. Brandstein also discloses and discusses Wiener
05:15:20 9 Filters for noise reduction?

05:15:23 10 MR. RE: If we can call that.

05:15:26 11 Q. (By Mr. Re) And, in particular, Section 3.2 in the
05:15:30 12 chapter Post-filtering Techniques. It's called
05:15:39 13 Multichannel Wiener Filtering in Sub-bands. Do you see
05:15:44 14 that?

05:15:44 15 A. Yes.

05:15:45 16 Q. So it's pretty clear that you did not invent the idea
05:15:45 17 or technique of noise reduction with microphone arrays,
05:15:54 18 right?

05:15:54 19 A. Right.

05:15:54 20 Q. And you did not invent the specific noise reduction
05:15:57 21 algorithm used in your patent, such as the Wiener Filter,
05:16:03 22 right?

05:16:03 23 A. No, no, I didn't invent the Wiener Filter.

05:16:07 24 Q. You did not. And that noise reduction algorithm was
05:16:10 25 obviously public knowledge well before 2011, right?

05:16:14 1 A. Right.

05:16:15 2 Q. Right. So let's just go to the second item on the
05:16:18 3 board, and noise reduction, I'm going to list as known,
05:16:26 4 publicly known, okay?

05:16:40 5 Now let's discuss echo cancellation.

05:16:46 6 MR. RE: Let's specifically go to your
05:16:48 7 presentation which is Plaintiff's Exhibit 45.8. Thank you.

05:16:54 8 Q. (By Mr. Re) You -- you presented what you thought were
05:16:56 9 ideas about echo cancellation, right?

05:16:58 10 A. I present idea of echo cancellation for the -- for the
05:17:05 11 device.

05:17:05 12 Q. Yes.

05:17:06 13 And this is a page from your presentation on
05:17:10 14 Page 8, and the title of Page 8 is called Echo
05:17:15 15 Cancellation, right?

05:17:15 16 A. Yes.

05:17:16 17 Q. And you did not invent the idea of echo cancellation,
05:17:27 18 right?

05:17:27 19 A. Right.

05:17:27 20 Q. And echo cancellation has been described in basic
05:17:30 21 textbooks well before you filed for your '049 patent
05:17:36 22 application, right?

05:17:37 23 A. Right.

05:17:38 24 MR. RE: I'd like to show you if we can go back to
05:17:43 25 Exhibit 49, Page 14, Mr. Berk.

05:17:47 1 Q. (By Mr. Re) We can see here that Dr. Brandstein's 2001
05:17:50 2 textbook had an entire chapter on acoustic echo
05:17:57 3 cancellation for beamforming microphone arrays. Do you see
05:18:01 4 that?

05:18:01 5 A. Yes.

05:18:01 6 Q. So you did not invent using echo cancellation
05:18:12 7 techniques with a microphone array system, right?

05:18:15 8 A. Right.

05:18:15 9 Q. And that was public knowledge well before your 2011
05:18:20 10 meeting at Amazon, right?

05:18:23 11 A. Yes.

05:18:23 12 Q. Okay. So I'm going to go to the board and just put
05:18:26 13 "known," for publicly known for echo cancellation using
05:18:31 14 microphone arrays.

05:18:32 15 Now I'd like to go to what you call one of your
05:18:47 16 core technologies, sound source localization. You see
05:18:52 17 that's next on the board?

05:18:53 18 A. Yes.

05:18:53 19 Q. And turn to Page 9 of your presentation of Exhibit 45,
05:18:58 20 you have a page specific to sound source localization, and
05:19:02 21 I believe this was shown in your direct. Do you see that?

05:19:06 22 A. Yes.

05:19:06 23 Q. And you did not invent the idea of sound source
05:19:12 24 localization using a microphone array, right?

05:19:15 25 A. Right.

05:19:15 1 Q. In fact, sound source localization is well-known before
05:19:22 2 your meeting at Amazon, right?

05:19:25 3 A. Right.

05:19:25 4 Q. And, in fact, if we go to our book on Microphone
05:19:31 5 Arrays, you can see in Brandstein, there's an entire
05:19:35 6 chapter, the table of contents, discussing sound source
05:19:40 7 localization, right?

05:19:41 8 A. Uh-huh.

05:19:42 9 Q. And sound source localization is just figuring out the
05:19:44 10 direction the sound is coming from?

05:19:47 11 A. Yes.

05:19:47 12 Q. Or the -- or the location where the sound is coming
05:19:51 13 from?

05:19:51 14 A. Yes.

05:19:52 15 Q. So I know you're talking from over there because my
05:19:55 16 ears have some sound source localization capability?

05:20:00 17 A. Right.

05:20:00 18 Q. And so you did not invent sound source localization
05:20:07 19 using a microphone array system, right?

05:20:11 20 A. Right.

05:20:11 21 Q. And that was public knowledge well before 2011 when you
05:20:15 22 visited Amazon, right?

05:20:18 23 A. Right.

05:20:19 24 Q. And your -- your '049 patent, in fact, it uses a very
05:20:24 25 specific kind of sound source localization technique called

05:20:30 1 SRP-PHAT. And PHAT is spelled P-H-A-T. Correct?

05:20:37 2 A. Did you display that on the screen?

05:20:40 3 Q. Yes, I'd like to.

05:20:42 4 MR. RE: It's Plaintiff's Exhibit 1, Page 42, at
05:20:45 5 Column 11, Lines 25 through 28. If we can show that to
05:20:52 6 Dr. Li, Mr. Berk. Column 11, Lines -- there we go. You're
05:21:12 7 zoning in on it. That's it.

05:21:15 8 Q. (By Mr. Re) And do you see that your patent
05:21:18 9 specifically refers to this algorithm for sound source
05:21:24 10 localization? Do you see that?

05:21:25 11 A. Yes.

05:21:25 12 Q. But you do know, sir, that Dr. Brandstein has a whole
05:21:37 13 section using the SRP-PHAT algorithm for sound source
05:21:44 14 localization in a microphone array system, right?

05:21:45 15 A. Could you repeat your question?

05:21:52 16 MR. RE: Let's show Mr. Brandstein --
05:21:55 17 Dr. Brandstein's 2001 textbook, specifically Section 8.3.5.
05:22:05 18 There we go.

05:22:06 19 Q. (By Mr. Re) Looking at the screen, sir, isn't it clear
05:22:09 20 to you that the use of SRP-PHAT algorithm for sound source
05:22:15 21 localization techniques in a microphone array system was
05:22:17 22 well-known well before you visited Amazon?

05:22:21 23 A. Yes.

05:22:24 24 Q. And so I'll just go to my board again and write "known"
05:22:31 25 to signify that sound source localization was known --

05:22:37 1 THE COURT: Mr. Re, you don't need to make
05:22:40 2 comments that aren't in the form of a question. If you
05:22:42 3 want to ask him will he confirm if you write it on the
05:22:45 4 board, that's fine. But if you're not asking a question,
05:22:49 5 you're engaged in a sidebar comment, and we don't need
05:22:53 6 that.

05:22:54 7 MR. RE: You're right, Your Honor. And I
05:22:55 8 apologize.

05:22:57 9 Q. (By Mr. Re) So you do agree that sound source
05:22:59 10 localization techniques using SRP-PHAT algorithms were
05:23:04 11 known, well before you visited Amazon in 2011, correct?

05:23:06 12 A. Yes.

05:23:17 13 Q. Now, the last item on your list I see is 3D sound. Do
05:23:23 14 you see that?

05:23:24 15 A. Yes.

05:23:24 16 Q. But I noticed your attorney in opening statement, he
05:23:27 17 didn't highlight that feature because that feature is not
05:23:30 18 really at issue in this case, right?

05:23:31 19 A. Right. That's -- that's not included in the pat -- the
05:23:36 20 '049 patent.

05:23:36 21 Q. Right. So we will -- is it all right if I just cross
05:23:40 22 it off the list because that, you agree, is not at issue in
05:23:44 23 this case, right?

05:23:45 24 A. Right.

05:23:45 25 Q. Now, you also mentioned in your direct that you said or

05:24:04 1 discussed with Amazon in the 2011 meeting something you
05:24:09 2 called adaptive beamforming; isn't that right?

05:24:11 3 A. Yes.

05:24:11 4 Q. And so adaptive beamforming is another core technology
05:24:17 5 under the category of acoustic signal processing, that you
05:24:20 6 discussed at Amazon?

05:24:22 7 A. Right.

05:24:22 8 Q. So it could just as easily be on this list as another
05:24:26 9 core technology, right?

05:24:27 10 A. Right.

05:24:28 11 Q. Now -- but you did not invent adaptive beamforming for
05:24:54 12 use in a microphone array system, right?

05:24:56 13 A. We did develop adaptive beamforming algorithm. We
05:25:09 14 worked together with all this technology components.

05:25:12 15 Q. But my -- my question, sir, was, but adaptive
05:25:16 16 beamforming for use in a microphone array system was
05:25:19 17 well-known before you met with Amazon in 2011, right?

05:25:27 18 A. I know the term of adaptive beamforming was available
05:25:32 19 before my visit.

05:25:35 20 Q. Just the term?

05:25:36 21 A. The technology, but I don't know -- adaptive
05:25:44 22 beamforming -- you're talking about adaptive beamforming
05:25:46 23 and the microphone array together, right?

05:25:49 24 Q. Well, let me see if I can --

05:25:51 25 A. Well, you asked me the question. I heard that you

05:25:54 1 said --

05:25:55 2 Q. Yes --

05:25:55 3 A. Adaptive beamforming for microphone array.

05:25:58 4 Q. Yes. Adaptive beamforming for microphone arrays, that
05:26:03 5 was well-known before you came to Amazon, right?

05:26:05 6 A. I told you that we developed implementation -- an
05:26:15 7 algorithm, an algorithm for adaptive beamforming for
05:26:18 8 microphone array.

05:26:18 9 Q. Okay. And using adaptive beamforming for microphone
05:26:22 10 arrays was well-known, right?

05:26:26 11 A. I don't know if it's well-known or not well-known.
05:26:32 12 Even adaptive beamforming can have a different kind of
05:26:34 13 implementation under the same title.

05:26:38 14 Q. Okay. Let's take a look at Dr. Brandstein's book.

05:26:46 15 MR. RE: And if we could go to Chapter 5.

05:26:50 16 Q. (By Mr. Re) And you see he has an entire chapter on
05:26:55 17 robust adaptive beamforming in his book on microphones
05:26:58 18 already?

05:26:58 19 A. Uh-huh.

05:26:59 20 Q. Do you see that?

05:27:00 21 A. Uh-huh.

05:27:01 22 THE COURT: Again, Dr. Li, you're going to have to
05:27:04 23 answer out loud yes or no. Non-verbalized answers like
05:27:08 24 "uh-huh" are not clear in the record. So, please, try to
05:27:11 25 give us a verbalized answer, okay?

05:27:16 1 THE WITNESS: I'm sorry, Your Honor.

05:27:17 2 THE COURT: That's all right.

05:27:18 3 Let's proceed.

05:27:19 4 Q. (By Mr. Re) So we can agree that using adaptive
05:27:22 5 beamforming in microphone arrays is well-known? It's in
05:27:27 6 Dr. Brandstein's book 10 years before you visited Amazon,
05:27:30 7 right?

05:27:30 8 A. Under this subject, under their publication, this
05:27:37 9 publication is well-known.

05:27:40 10 Q. Yes, and this was a published book that anyone could
05:27:43 11 buy in the early 2000s, right?

05:27:44 12 A. Yeah, whatever in the book is --

05:27:53 13 Q. Thank you.

05:27:54 14 A. -- is known.

05:27:56 15 Q. In your presentation at Amazon and in your testimony
05:28:08 16 today, you also referred to the use of a digital signal
05:28:13 17 processor, or DSP. Do you remember that?

05:28:17 18 A. That right here, the DSP means digital signal
05:28:30 19 processing.

05:28:30 20 Q. Yes.

05:28:31 21 A. And an implementation, for example, on the products are
05:28:35 22 ARM chip, and ARM chip can be implemented as a digital
05:28:41 23 signal processor.

05:28:41 24 Q. Right. And one of the items on this page entitled Core
05:28:49 25 Technologies specifically mentions DSP-based hardware

05:28:53 1 development. Do you see that?

05:28:56 2 A. Yes.

05:28:57 3 Q. But -- and so did you remember actually discussing with
05:29:04 4 Amazon your ideas about using a digital signal processor?

05:29:09 5 A. Yes, we did, and I think we also showed demo --

05:29:16 6 Q. Okay.

05:29:16 7 A. -- using hardware, using microprocessor to -- to be
05:29:28 8 implemented -- for digital signal processing.

05:29:39 9 Q. But you did not invent the digital signal processor,
05:29:43 10 right?

05:29:43 11 A. No.

05:29:44 12 Q. And you did not invent the idea of using a digital
05:29:50 13 signal processor with a microphone array, right?

05:29:52 14 A. No.

05:29:52 15 Q. And digital signal processors for use in microphone
05:30:01 16 arrays is also well-known, right?

05:30:06 17 A. Yes.

05:30:08 18 MR. RE: And if I can go to Dr. Brandstein's book
05:30:12 19 on microphone arrays, in particular, Section 5.6.

05:30:19 20 Q. (By Mr. Re) It's -- first sentence in Section 5.6.1,
05:30:26 21 implementation of hardware evaluation of a robust adaptive
05:30:27 22 microphone array, he specifically points out that it can be
05:30:34 23 implemented on a portable and flexible DSP system. Do you
05:30:38 24 see that?

05:30:39 25 A. Yes.

05:30:39 1 Q. So using DSPs for microphone arrays was publicly known,
05:30:43 2 at least by 2001, about 10 years before you visited Amazon,
05:30:50 3 right?

05:30:50 4 A. Here, right.

05:30:56 5 Q. Okay. So you agree with my board that these items,
05:31:11 6 these ideas for use in a microphone array, were known well
05:31:17 7 before you came to Amazon in 2011, correct?

05:31:22 8 A. This technology titles.

05:31:35 9 Q. And you were here, these -- these titles you said, you
05:31:38 10 call them titles? It's concepts, right, you were here for
05:31:42 11 opening statements, right?

05:31:43 12 A. Can you repeat your question?

05:31:45 13 Q. I want to show you what your counsel showed the jury
05:31:49 14 earlier today. It was a Slide 18. Do you remember this?

05:31:52 15 A. Yes.

05:31:55 16 Q. And your counsel said that -- that you and Vocalife
05:32:03 17 will show infringement, that my client uses what is in the
05:32:08 18 patent, as shown on Slide 18 during the opening statement.
05:32:14 19 Do you remember that?

05:32:15 20 A. Yes.

05:32:17 21 Q. And you agree with what your counsel said with regard
05:32:20 22 to your patent, which is PTX-1, and you agree with this
05:32:25 23 listing?

05:32:27 24 A. That's -- our claim include all of this technology
05:32:31 25 components.

05:32:33 1 Q. Yes. And the components that was on the Slide 18

05:32:38 2 includes No. 1, microphone array, right?

05:32:42 3 A. Right.

05:32:44 4 Q. Right. It also includes sound source localization,

05:32:52 5 right?

05:32:52 6 A. Yes.

05:32:54 7 Q. Adaptive beamforming unit, right?

05:32:57 8 A. Right.

05:33:00 9 Q. Noise reduction unit, right?

05:33:04 10 A. Yes.

05:33:07 11 Q. And in a digital signal processor, right?

05:33:15 12 A. Right.

05:33:15 13 Q. And you have agreed with me that the titles or concepts
05:33:27 14 shown on Slide 18 were well-known before you visited Amazon
05:33:32 15 in 2011, correct?

05:33:37 16 A. These are title of components, yes.

05:33:39 17 Q. Yes. You also tried to get patents on these features
05:33:52 18 well before the filing of this provisional application that
05:33:57 19 Mr. Fabricant discussed with you, filed in September of
05:33:59 20 2010, right?

05:34:00 21 A. Could you talk close -- closer to the microphone?

05:34:04 22 That's a close-talking microphone.

05:34:07 23 Q. It's not far-field, right?

05:34:08 24 A. Not far-field.

05:34:10 25 Q. Okay. You -- if I -- if I understand the evidence

05:34:14 1 correctly, you sought to patent many of these concepts or
05:34:21 2 technologies, as you call them, before you filed your
05:34:27 3 September 2010 provisional, right?

05:34:29 4 A. Yes.

05:34:34 5 Q. And let's go through some of those quickly. And I
05:34:37 6 first want to show you what's been marked as Defendant's
05:34:41 7 Exhibit 954.

05:34:53 8 And this is a 2006 publication of one of your
05:34:57 9 patent applications, right?

05:34:58 10 A. Yes.

05:34:58 11 Q. And you filed this application on August 9th, 2005,
05:35:02 12 right?

05:35:02 13 A. Yes.

05:35:05 14 Q. And as you can see, the Patent Office published it on
05:35:10 15 February 9th, 2006?

05:35:12 16 A. Yes.

05:35:13 17 Q. And you are listed as the sole inventor, right?

05:35:16 18 A. Yes.

05:35:17 19 Q. And I'd like to show you Figure 1 of this. And if we
05:35:28 20 look at Figure 1, we can see that this application included
05:35:31 21 a microphone array. You see that?

05:35:32 22 A. Yes.

05:35:32 23 Q. A digital signal processor?

05:35:34 24 A. Yes.

05:35:35 25 Q. And a noise reduction unit, correct?

05:35:40 1 A. Right.

05:35:41 2 Q. And in Paragraph 17 of this 2006 publication, it
05:35:52 3 describes an adaptive beamforming unit that steers the beam
05:35:59 4 in the direction of the sound -- the direction of the
05:36:01 5 source of the sound. Do you see that?

05:36:03 6 A. Could you highlight that part?

05:36:05 7 Q. Yes.

05:36:07 8 MR. RE: Let's highlight the first five lines all
05:36:09 9 the way to speaker's mouth.

05:36:15 10 Q. (By Mr. Re) And I'll read it into the record if that
05:36:17 11 will speed things along.

05:36:19 12 Moreover, because of the microphone array consists
05:36:21 13 of a set of microphones that are spatially distributed at
05:36:25 14 known locations with reference to a common point, the
05:36:28 15 invention can implement an array signal processing
05:36:31 16 algorithm, by weighting the microphone outputs, and an
05:36:36 17 acoustic beam can be formed and steered along some
05:36:43 18 specified directions of the source of the sound, e.g.,
05:36:50 19 speaker's mouth.

05:36:51 20 Did I read it correctly into the record?

05:36:54 21 A. Yes.

05:36:54 22 Q. And this was your published application. You disclosed
05:36:58 23 this to the world in 2006; isn't that right?

05:37:01 24 A. Yes.

05:37:07 25 Q. And the device of this patent application also includes

05:37:10 1 a noise reduction unit, doesn't it?

05:37:13 2 A. Could you highlight that part?

05:37:15 3 Q. Do you recall?

05:37:18 4 A. Could you highlight that part?

05:37:20 5 Q. But do you recall, as you sit here, or do you need me
05:37:25 6 to go through it line-by-line?

05:37:28 7 A. You said do I remember whether I put noise reduction
05:37:32 8 in. I may have put in noise reduction.

05:37:34 9 Q. You're correct. Let's take a look at that.

05:37:37 10 MR. RE: Paragraph 19 of this document.

05:37:41 11 Q. (By Mr. Re) Do you see in the first sentence of
05:37:43 12 Paragraph 19, you specifically refer to noise reduction and
05:37:48 13 speech enhancement unit Step 30. Do you see that?

05:37:54 14 A. Yes.

05:37:54 15 Q. And, specifically, it's describing that the noise
05:38:01 16 reduction unit may be a Wiener Filter, correct?

05:38:04 17 A. Yes.

05:38:04 18 Q. So from this examination, isn't it clear to you that
05:38:10 19 your 2005 patent application, which published in 2006,
05:38:14 20 included a device with a microphone array, sound source
05:38:21 21 localization, adaptive beamforming, a noise reduction unit
05:38:25 22 using a DSP. Correct?

05:38:29 23 A. I don't remember -- sound source localization.

05:38:34 24 Q. You don't remember when I was --

05:38:35 25 A. No, no, on this -- could you highlight?

05:38:48 1 Q. We'll move along.

05:38:49 2 And this patent application --

05:38:51 3 A. Sorry.

05:38:53 4 Q. This patent --

05:38:54 5 A. No, no, no. I asked a question. Could you highlight
05:38:59 6 that part?

05:38:59 7 THE COURT: Dr. Li, you don't get to ask
05:39:01 8 questions. He asks questions.

05:39:04 9 THE WITNESS: Sure.

05:39:04 10 THE COURT: And then Mr. Fabricant is going to get
05:39:06 11 an opportunity to ask more questions. So either answer the
05:39:09 12 question or tell the attorney you don't understand, but you
05:39:14 13 don't get to ask questions at this point.

05:39:16 14 THE WITNESS: Okay.

05:39:17 15 THE COURT: All right. Let's continue, Mr. Re.

05:39:21 16 Q. (By Mr. Re) This application was rejected by the
05:39:25 17 Patent Office. Do you remember that?

05:39:25 18 A. Again, I'm sorry, Mr. Re. Could you talk in the front
05:39:30 19 of the microphone, please?

05:39:31 20 Q. I'm sorry. I am sorry.

05:39:33 21 THE COURT: I think he's used to Mr. Fabricant's
05:39:35 22 voice. The volume of it anyway.

05:39:41 23 MR. RE: Okay.

05:39:42 24 Q. (By Mr. Re) You know, sir, of course, that this patent
05:39:48 25 application was rejected by the Patent Office because the

05:39:51 1 features in this patent were already known, correct?

05:39:58 2 A. I know that was a reject, but I don't know the reason
05:40:04 3 you explained. Is that an official explanation from the
05:40:10 4 Patent Office?

05:40:11 5 Q. Yes. Want to take a look at that.

05:40:15 6 MR. RE: Let's take a look at DTX-957.

05:40:20 7 Q. (By Mr. Re) Maybe this will refresh your recollection.

05:40:23 8 MR. RE: Specifically, Page 41.

05:40:27 9 Q. (By Mr. Re) And do you see that all the claims were
05:40:29 10 rejected, 1 through 11, of this patent application? You
05:40:32 11 know that, right?

05:40:33 12 A. It's on there.

05:40:37 13 Q. Okay. And you abandoned this application. You know
05:40:41 14 that, right?

05:40:42 15 A. Yes.

05:40:42 16 Q. Which means it was published and goes to the public
05:40:46 17 domain. Do you know what that means?

05:40:49 18 A. Yes.

05:40:49 19 Q. Okay. And you don't -- you seem not to recall the
05:41:01 20 reason why it was rejected. Do you recall why?

05:41:04 21 A. I don't remember why, but you point out that this claim
05:41:16 22 has been reject, so -- as this claim -- claim number,
05:41:20 23 right.

05:41:20 24 Q. Let me show you the reasoning for the rejection.

05:41:26 25 MR. RE: If I can go to --

05:41:27 1 THE COURT: Mr. Re, let me show you the reasons
05:41:30 2 for the rejection, is a sidebar comment. You're testifying
05:41:33 3 to the jury. Ask the witness a question.

05:41:37 4 Q. (By Mr. Re) Isn't it true that this was rejected
05:41:40 5 because the prior art rendered the claims obvious?

05:41:47 6 A. I -- I think so.

05:41:50 7 Q. Yes. And isn't it specifically rejected for
05:41:54 8 obviousness over the prior art?

05:42:00 9 A. Again, I didn't read it. As what you told me -- but
05:42:06 10 the patent opinion, if it rejects, must have some reason.

05:42:12 11 MR. RE: And, Mr. Berk, can we show the reason?
05:42:19 12 Paragraph 9, the first paragraph. You see 9, just
05:42:24 13 highlight that.

05:42:25 14 Q. (By Mr. Re) Do you understand, Dr. Li, that the claims
05:42:29 15 stood rejected because they were unpatentable over prior
05:42:34 16 art for obviousness, Section 103?

05:42:39 17 A. I saw that.

05:42:48 18 Q. Okay. Let's go to another application.

05:42:51 19 MR. RE: Let's go to Defendants' Exhibit 956.

05:42:56 20 Q. (By Mr. Re) Is this another one of your patent
05:42:58 21 applications?

05:43:01 22 A. Yes.

05:43:01 23 Q. And did this application -- did you file this on
05:43:05 24 September 9th, 2005?

05:43:08 25 A. Yes.

05:43:10 1 Q. And you allowed this to publish on March 15th, 2007,
05:43:16 2 correct?

05:43:16 3 A. Yes.

05:43:17 4 Q. And you are listed as an inventor on this application,
05:43:25 5 right?

05:43:25 6 A. Correct.

05:43:25 7 Q. And I'd like to show you Figure 2 of this application.

05:43:33 8 And in Figure 2, isn't it true that the device in
05:43:36 9 this patent application included a microphone device, a
05:43:41 10 digital signal processor, and a noise reduction unit?

05:43:45 11 A. Yes.

05:43:47 12 Q. And doesn't this application also explain that the
05:44:03 13 adaptive beamforming unit steers the beam in the direction
05:44:06 14 of the source of the sound?

05:44:06 15 A. I didn't see that word "adaptive beamforming" from this
05:44:13 16 picture.

05:44:14 17 MR. RE: Let's go to Paragraph 16 of this
05:44:20 18 publication.

05:44:21 19 Q. (By Mr. Re) And Paragraph 16 -- from reading Paragraph
05:44:28 20 16, and I'll highlight portions to help you, can you see
05:44:31 21 that it discloses an acoustic beam that can be formed and
05:44:35 22 steered in the directions of the source of the sound?

05:44:41 23 A. Yes.

05:44:42 24 Q. And if you look lower on the paragraph, do you
05:44:53 25 recognize that your application also discloses to the world

05:44:56 1 that the microphone array can find the source of the sound
05:44:59 2 and can follow the sound's location by an adaptive
05:45:04 3 algorithm? Do you see that?

05:45:06 4 A. Yes.

05:45:08 5 Q. And so this application disclosed to the world the use
05:45:14 6 of an adaptive beamforming capability, right?

05:45:18 7 A. No, not the same meaning.

05:45:19 8 Q. So the meaning of the word "adaptive beamformer" can
05:45:22 9 have different meanings depending on the document and
05:45:25 10 usage?

05:45:26 11 A. Here it -- it did not talk about adaptive beamforming.

05:45:37 12 Q. Okay. And -- but it is talking about an acoustic beam
05:45:49 13 that can be formed and steered to the direction of the
05:45:51 14 source of the sound, right?

05:45:52 15 A. You're pointing out somewhere from this patent
05:45:58 16 application?

05:45:58 17 Q. Right, what's highlighted at the top. It's an acoustic
05:46:03 18 beam can be formed and steered, right?

05:46:05 19 A. Yes.

05:46:07 20 Q. And if we go to the next paragraph, this application
05:46:13 21 also discloses a noise reduction unit, correct?

05:46:26 22 A. Yes.

05:46:26 23 Q. And isn't it true that this patent application was also
05:46:31 24 rejected by the Patent Office because the claims were
05:46:34 25 obvious in view of the prior art?

05:46:38 1 A. This application was reject.

05:46:44 2 Q. Yes. And, in fact, each and every claim of this
05:46:48 3 application was rejected in a final Office Action, right?

05:46:53 4 A. I don't remember, but you tell me. I guess, yes.

05:47:02 5 MR. RE: If we can call up, to complete this,
05:47:06 6 Defendants' Exhibit 959, Page 4, the Disposition of Claims.

05:47:18 7 Q. (By Mr. Re) Dr. Li, does this confirm in your mind
05:47:21 8 that each and every claim of this application was rejected
05:47:23 9 by the Patent Office in view of the prior art?

05:47:24 10 A. Where is the numbers -- Claim 6?

05:47:36 11 Q. 6 does not appear to be pending, so there's no
05:47:39 12 rejection of a non-pending claim. Do you see that?

05:47:43 13 MR. RE: If we go to -- you can highlight.

05:47:46 14 A. I see -- I see 1 through 5, 7 through 19 were rejected.

05:47:52 15 Q. (By Mr. Re) Correct. Okay. And isn't it true that
05:48:00 16 you abandoned this application, as well, right?

05:48:03 17 A. Yes.

05:48:03 18 Q. So as of -- at this time, you knew you could not get a
05:48:11 19 patent on the features we just discussed in these last two
05:48:14 20 patent applications, right?

05:48:16 21 A. Right.

05:48:17 22 Q. Let's go to another patent application.

05:48:20 23 MR. RE: If we can go to Defendants' Exhibit 955.

05:48:33 24 Q. (By Mr. Re) Do you recall filing this patent
05:48:35 25 application on May 21, 2006?

05:48:38 1 A. Yes.

05:48:38 2 Q. And do you recall that this was published to the world
05:48:42 3 on November 30th, 2006?

05:48:45 4 A. Yes.

05:48:46 5 Q. And you are listed as the sole inventor on this
05:48:50 6 application, right?

05:48:52 7 A. Right.

05:48:55 8 Q. And I want to show you what you tried to claim in this
05:49:01 9 application.

05:49:01 10 MR. RE: If we can go to Claim 4 of this
05:49:04 11 application.

05:49:11 12 Q. (By Mr. Re) And do you see in this claim you wrote --

05:49:16 13 MR. RE: If we can just highlight.

05:49:18 14 Q. (By Mr. Re) You wrote: The surface constructed by the
05:49:22 15 points of microphone components of the microphone array can
05:49:25 16 be in any geometry shape, such as a sphere, a half sphere,
05:49:31 17 partial sphere, circle, et cetera, and that it is not
05:49:36 18 necessary to be in a flat plane.

05:49:39 19 Right?

05:49:39 20 A. Yes.

05:49:40 21 Q. And so here's an application where you are disclosing
05:49:43 22 at least a circular microphone array, right?

05:49:46 23 A. Yes.

05:49:49 24 THE COURT: Mr. Re, let me ask you, what do you
05:49:52 25 anticipate the remainder of your cross-examination to be?

05:49:55 1 Just an estimate, time-wise.

05:49:59 2 MR. RE: Well into tomorrow, and I have --

05:50:02 3 THE COURT: That's what I'm trying to determine.

05:50:04 4 What is "well into tomorrow"?

05:50:06 5 MR. RE: At least -- at least another hour-plus.

05:50:09 6 THE COURT: Okay. Then, with that, we'll use this
05:50:12 7 point -- there's not a perfect point. But we'll use this
05:50:15 8 point to break for the day.

05:50:17 9 Ladies and gentlemen of the jury, I'm going to ask
05:50:20 10 you when you leave in a few minutes, if you'll make sure
05:50:23 11 you take your notebooks with you and leave them closed on
05:50:26 12 the table in the jury room.

05:50:28 13 I'll remind you that we're going to do our best to
05:50:31 14 start at 8:30 in the morning. So please plan your travel
05:50:34 15 so that you can be assembled and in the jury room a little
05:50:39 16 bit before 8:30 and ready to go.

05:50:41 17 Please follow all the instructions I've given you,
05:50:44 18 including, of course, not to discuss the case with anyone
05:50:49 19 or among yourselves.

05:50:50 20 And I promise you, when you get home tonight,
05:50:53 21 unless you live alone, you're going to get a question as
05:50:55 22 soon as you walk through that door. Just tell whoever asks
05:50:58 23 that question, you're not even going to try to answer it,
05:51:04 24 based on my instructions to you.

05:51:06 25 Please travel safely to your homes. We'll see you

05:51:10 1 in the morning. With those instructions, we're excused for
05:51:13 2 the evening.

05:51:14 3 COURT SECURITY OFFICER: All rise.

05:51:16 4 (Jury out.)

05:51:16 5 THE COURT: Please be seated.

05:51:40 6 You may step down, Dr. Li. You may step down,
05:51:46 7 Dr. Li. You can return to the counsel table.

05:51:51 8 THE WITNESS: Thank you.

05:51:52 9 THE COURT: Counsel, let me remind you that before
05:51:54 10 I bring in the jury in the morning, as I indicated during
05:51:58 11 the pre-trial conferences, I will expect both sides to have
05:52:01 12 someone prepared to go to the podium and read into the
05:52:04 13 record those items from the list of pre-admitted exhibits
05:52:07 14 that have been used during today's portion of the trial.

05:52:11 15 Also, let me remind you of your continuing and
05:52:17 16 strenuous obligation to meet and confer regarding any
05:52:21 17 possible disputes that might arise with regard to
05:52:25 18 demonstratives or other issues that would be used during
05:52:27 19 tomorrow's portion of the trial.

05:52:30 20 In the event that there are disputes that cannot
05:52:33 21 be resolved, then we'll follow the process that I described
05:52:37 22 in pre-trial. I'll look for a notebook delivered to
05:52:40 23 chambers by 7:00 o'clock, after a 10:00 o'clock email
05:52:45 24 briefing. That notebook should have whatever is a
05:52:48 25 surviving dispute in it, outlined with a succinct paragraph

05:52:53 1 from each party stating your position on whatever the
05:52:56 2 dispute is.

05:52:56 3 And then I'll be prepared and in chambers not
05:53:00 4 later than 7:30 so that I can meet with you and give you
05:53:04 5 guidance, again, all for the purpose of maximizing your
05:53:06 6 usable trial time that's been designated.

05:53:09 7 All right. Are there questions from either party
05:53:13 8 before we recess for the evening?

05:53:15 9 MS. TRUELOVE: Nothing from Plaintiff, Your Honor.

05:53:17 10 MR. DACUS: Just one thing, Your Honor, and it
05:53:20 11 probably falls in the category of lawyers saying things
05:53:23 12 that they don't need to say, but --

05:53:24 13 THE COURT: That's a big category, Mr. Dacus.

05:53:27 14 MR. DACUS: They say them anyway to make
05:53:27 15 themselves and others around them feel good. But it's been
05:53:28 16 my understanding that the Court's practice is for the
05:53:31 17 witness whose examination is continuing the next day, not
05:53:34 18 to consult with his lawyers related to the testimony.

05:53:38 19 THE COURT: That's the Court's practice.

05:53:41 20 MR. DACUS: I've said it. I'll sit down. Thank
05:53:44 21 you.

05:53:44 22 THE COURT: All right. One other thing, let me
05:53:47 23 say, I have no problem with counsel using boards or using
05:53:51 24 the easel. But Mr. Fabricant has had the podium between
05:53:56 25 the easel and himself the entire time. We need to make

05:53:56 1 sure the easel is used so opposing counsel at least has an
05:54:01 2 opportunity to see it.

05:54:02 3 And it's clear, Dr. Re [sic], as was mentioned in
05:54:07 4 the early part of the direct, has a hearing problem. So I
05:54:08 5 think it behooves all of us to raise our volume as best we
05:54:14 6 can.

05:54:14 7 Okay. So if there's not anything further, we
05:54:16 8 stand in recess.

05:54:18 9 COURT SECURITY OFFICER: All rise.

05:54:19 10 (Recess.)

11

12

CERTIFICATION

13

14 I HEREBY CERTIFY that the foregoing is a true and
15 correct transcript from the stenographic notes of the
16 proceedings in the above-entitled matter to the best of my
17 ability.

18

19

20 /S/ Shelly Holmes
SHELLY HOLMES, CSR, TCR
21 OFFICIAL REPORTER
State of Texas No.: 7804
22 Expiration Date: 12/31/2020

10/1/2020
Date

23

24

25